The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 793.---Vol. XX.] LONDON, SATURDAY, NOVEMBER 2, 1850. [Price 6d.

POT HOUSE BRIDGE IRON-WORKS, NEAR BILSTON.—TO IRONMASTERS, ENGINEERS, AND OTHERS.

MR. R. S. WALKER will SELL, BY AUCTION, at the King's Arms Inn, BILSTON, on Monday, November 11, 1850, at Six o'clock in the evening, subject to conditions, the following important PREMISES and MACHINERY. The property comprising Lot I. has been recently erected upon the banks of the Birmingham Canal, and the whole was late in the occupation of Messrs. Arrowsmith and Davis:—

LOT I.—The POT HOUSE BRIDGE IRON-WORKS, for a term of 14 years, from the 29th Sept., 1849. A purchaser has the option of giving up possession of the land at the expiration of the 14 years, and removing the erections and machinery, or of renewing the lease for 14 years, with the like power of removal.

The PLANT includes a 35-horse power condensing engine, a 25-horse power horizontal engine, to drive the machinery, a 10-horse power horizontal engine, with lathe for turning rolls, blowing apparatus, large forge hammer, about 40 pairs of rolls, with machinery complete, six puddling furnaces, two cupolas, drying, heating, and air furnaces.

These works are capable of producing from 70 to 80 tons of manufactured iron per week.

LOT II.—The GOODWILL and IMMEDIATE POSSESSION of the ENGINE YARD, near Lot I. The BUILDINGS consist of several workshops, engine and storehouses, blacksmiths' shops and offices, with a 10-horse power engine and large lathe.

To view the lots apply to Mr. Berkeley, upon the premises; and a plan of the works and machinery may be seen, and further particulars obtained, on application to Mr. T. M. Whitehouse, attorney-at-law, or the auctioneer, both of Wolverhampton; or to Mr. Wight, solicitor, Kingswinford.

DEAN FOREST.—VALUABLE COAL AND IRON WORKS.

Affording an opportunity seldom offered for acquiring a lucrative and first-rate concern.

MESSRS. ADAM MURRAY & SON are instructed to SELL, BY AUCTION, at the King's Head, NEWPORT, MONMOUTHSHIRE, on Saturday, the 16th day of November next, at Twelve o'clock, at noon (unless an acceptable offer be previously made), ALL THE IRON AND COAL WORKS, situate at BREAM, in the hundred of ST. BRIAVELS, GLOUCESTERSHIRE, now in the occupation of the BROMLEY HILL IRON AND COAL COMPANY.

The COAL-WORKS comprise two gales of the WHITTINGTON OR YARD DELF VEIN OF COAL, known as the Bromley Hill level, and the Midsummer level, amounting to 200 acres, subject to a Royalty to the Crown of 1½d. per ton, or a minimum rent of £4 a-year. Adjoining, is the BROMLEY HILL IRON MINE, of 400 acres, subject to a Royalty of 1d. per ton, and an annual rent to the Crown of £12. A well built BLAST FURNACE and a STEAM-ENGINE of 45-horse power, with various buildings, are erected on the mines, and a never-failing stream of water runs through them. These mines are well situated both for railway and water carriage.

For further particulars, apply to Mr. Arthur Ryland, solicitor, Cherry-street, Birmingham; Mr. Reginald A. Parker, solicitor, Old Jewry Chambers, London; Mr. Fryer, solicitor, Coleford; or to Messrs. A. Murray and Son, 35, Craven-street, Strand, London.

THE GREAT SALE AT THE BRITANNIA TUBULAR BRIDGE

Is positively fixed to take place on TUESDAY, the 19th day of NOVEMBER next, 1850, and many following days.

MESSRS. CHURTON have been instructed by the Directors of the Chester and Holyhead Railway to SELL, BY AUCTION, on Tuesday, the 19th day of November, 1850, and many following days, the whole of the PLANT, ROPES, CAPSTANS, CHAINS, HYDRAULIC PRESSES, and other MACHINERY, used in the Floating and Erection of the BRITANNIA TUBES.

Comprising 120,000 cubic feet of well-seasoned PINE TIMBER, in whole and half balks; 100 tons of large HEMP and MANILLA ROPES, nearly new; 3 powerful HYDRAULIC PRESSES, 2 20-horse power STEAM-ENGINES, with force pumps and tubular boilers; about 100 tons of excellent SUSPENSION BRIDGE CHAIN, in 6-feet links, suited for a bridge of 150 feet; 2 handsomely-made IRON PONTOONS, designed for floating landing stages; 8 large and powerful capstans, with oak bars; a large assortment of blocks and sheaves of unusual size; about 50 tons of chains and cables, 2 large fire-engines, with 7-inch pumps, hose, and apparatus complete, single and double purchase crabs, a number of rowing boats, workshops, store-rooms, and sundries.

Any further information may be obtained upon application to Edwin Clarke, Esq., Britannia Bridge, Bangor; or Messrs. Churton, auctioneers, Chester.

N.B.—Preliminary catalogues are just published, and may be had free upon application to Messrs. Churton, auctioneers, Chester. Full descriptive ones will shortly be ready for distribution.—Chester, October 28, 1850.

SPARE STEAM-ENGINE AND MATERIALS FOR SALE.

MR. GUMMOL has received instructions to SELL, BY AUCTION, at ROCKS AND TREVERBYN UNITED MINES, in the parish of ST. AUSTELL, CORNWALL, on Wednesday, the 27th day of November next, the following SPARE MACHINERY and MATERIALS:—

Comprising an excellent 70-inch STEAM-ENGINE, 10 and 7½ feet stroke, recently fitted with entirely new working gear, valves, condensing apparatus, &c., with 26 tons of new boilers.

36 fathoms of 16-inch PUMPS, with plunger bottom to fit.

1 15-inch pole, H and doorpiece, 1 large oak capstan axle, with cast centre piece.

Several 11 and 12-inch pumps, 1 12-inch pole and bottom.

An 18-feet WATER-WHEEL, and 8-head stamps, complete.

1 horse-whim, sundry lots of chain, timber, and other articles.

For inspecting the above, and for further information, apply to Mr. Gray, engineer, Rocks and Treverbyn United Mines, St. Austell, Cornwall.

The Sale will commence at Twelve o'clock precisely.

Dated Imperial Fire and Life Insurance Offices, St. Austell, Oct. 30, 1850.

UPSET PRICE REDUCED.

EAST OF SCOTLAND MALLEABLE IRON-WORKS.—TO BE EXPOSED TO SALE, BY PUBLIC AUCTION, within the TOWN-HOUSE, DUNFERMLINE, on Wednesday, the 6th day of November next, at Twelve o'clock noon, the EAST OF SCOTLAND MALLEABLE IRON-WORKS, at DUNFERMLINE, comprising—A STEAM-ENGINE, of 80-horse power, working the machinery, consisting of FORGE and 2 PUDDLE BAR TRAINS, of 16 in. diameter, HAMMER and PATENT SHINGLING MACHINE; also a 16-in. MERCHANT BAR or RAIL MILL, a 12-in. MILL for ordinary sized merchant bars, and an 8-in. GUIDE MILL, 13 PUDDLING FURNACES and 6 MILL FURNACES, the whole capable of producing 120 tons of bar-iron weekly.

A REFINERY STEAM-ENGINE, of 45-horse power, with blowing apparatus, complete, and two fires erected.

A complete SET OF WORKSHOPS, containing a 20-horse power STEAM-ENGINE, driving a powerful ROLL TURNING LATHE.

A PUMPING and CLAY MILL STEAM-ENGINE, of 16-horse power, used for the manufacture of fire-brick and pumping water for supply of engines.

Also the ESTATE of TRANSY, consisting of about 107 imperial acres, with elegant MANSION-HOUSE and PLEASURE GROUNDS, situate about half a mile to the east of the town of Dunfermline.

The above will be put up in one lot, at the reduced upset price of £16,000; if not sold in one lot, the Iron-Works will be then exposed separately, at the very low upset price of £9500; and if the Works be disposed of, the Estate will then after be put up at the sum of £6500.

The purchaser of the works will have it in his option to take all the necessary tools, loose machinery, and stocks of different kinds, at a valuation.

There will also BE SOLD, a STEAM-ENGINE, of 80-horse power, intended to drive the rolling-mills, apart from the forges, with strong cast-iron framing and relative machinery.

For further particulars, application may be made to Mr. James Inglis, the Chairman of the Board of Management; or to Johnstone, Russell, and Craig, writers, in Dunfermline, in whose hands may be seen the title deeds of the lands and articles of roup.

Dunfermline, October 3, 1850.

EXTENSIVE IRON-WORKS AND MINERAL LEASES FOR SALE, BY PRIVATE BARGAIN.—The BLAIR IRON-WORKS, belonging to the AYRSHIRE IRON COMPANY, situated in the parish of DALRY and county of AYE, consisting of TWO BLOWING ENGINES, FIVE BLAST-FURNACES, FOUNDRY, PIT ENGINES, and other requisite utensils for the furnaces and working the minerals, all in working order, besides nearly TWO HUNDRED WORKMEN'S HOUSES.

The extensive MINERAL FIELDS consist of BLACKBAND, IRONSTONE, COAL, LIMESTONE, and FIRE-CLAY, held under long leases, at moderate fixed rents and royalties, all in the immediate neighbourhood of the furnaces; and the works having a connection with the Ayrshire Railway, command great facilities for transit and shipping of the produce. There is a large STOCK of IRONSTONE on the ground, which may be had at a valuation, and considerable progress has been made in the

ERECTION OF MALLEABLE IRON-WORKS,

in connection with the furnaces, which may also be had.—The above are well worthy the attention of capitalists and parties in search of mineral fields.

For further information apply to Mr. Brown, 35, St. Vincent-place, Glasgow.

MINES.—FOR SALE, BY PRIVATE CONTRACT, the following PROPERTY, belonging to the GERMAN MINING COMPANY OF LONDON—viz.:

Several very productive COPPER MINES, situated at DILLENBURGH, in the Duchy of NASSAU, Germany, with SMELTING-HOUSE, OFFICES, STEAM-ENGINE, PUMPS, MINING TOOLS, &c. &c.

Also, TWO LEAD MINES, situated about 5 miles from Dillenburg, in the PRUSSIAN TERRITORY, which are now working with great prospective advantage.

Also, TWO IRONSTONE MINES, situated at MUSCHELLACH, near Hackenburg.

The whole of this property lies within an easy relative distance, and might be worked under one superintendence.

The celebrated QUICKSILVER MINES, LANDSBERG and STATILBERG, situated at OBERMOSCHEL, in RHENISH BAVARIA, with RESIDENCE, &c. &c., are also OFFERED FOR SALE.

For further particulars apply to Mr. T. Hacket, 26, Birchin-lane; Mr. H. J. Norris, 12, Southampton-buildings, Chancery-lane; Messrs. Stokes, Hollingsworth, Tyerman, and Johnston, solicitors, Gresham-street, and to Mr. T. R. Hacket, the manager of the mines, at Dillenburg.

MR. JAMES CROFTS, in renewing his offers of services to Capitalists in favour of INVESTMENTS in BRITISH MINES, is encouraged to refer, in terms more marked than he has hitherto done, to the classes of Mines either paying dividends or progressing rapidly towards that satisfactory position. Such remarkable success has attended the workings of numerous Cornish Mines during the last few months, as to demonstrate that it is only necessary to make a judicious selection of the adventure to insure profits quite as certain as any mercantile speculation whatever; and Mr. Crofts will be happy to indicate such undertakings as present the greatest chances of permanent dividends, or ultimate success in the workings, whether on a large or a small scale.

Mr. CROFTS takes this opportunity of referring to the important movement which has recently taken place for the establishment of a MINING SHARE EXCHANGE, as calculated to place buyers of shares, and the business generally, upon a sound basis, by approximating the interests both of buyer and seller more closely than hitherto, and, by the exercise of the powers proposed to be vested in the Committee of Management, to confine the business of the Exchange to *bonâ fide* undertakings only.

MR. CROFTS HAS FOR SALE:

WEST WHEAL JEWEL	10 shares
WHEAL CREBOR	5 „
BEDFORD UNITED	5 „
WHEAL TRESCOLL	50 „
NORTH SHEPHERDS	5 „
WEST GOGINAN	20 „
EAST SHARP TOR	30 „
EAST POLGOOTH	50 „
SPEARNE CONSOLS	10 „
BOSCEAN	2 „
PENZANCE CONSOLS	20 „
EAST TAMAR	10 „
SOUTH TAMAR	10 „
PENNANT AND CRAIGWEN	40 „

Also, LAMHEROOE, WHEAL SARAH, and WHEAL VINCENT.

Mr. CROFTS will punctually attend to communications from the country, whether for the sale or purchase of shares, and transacts business only for principals.

No. 4, King-street, Cheapside, Nov. 1, 1850.

MINING AND GENERAL AGENCY OFFICE,

No. 52, THREADNEEDLE-STREET, LONDON.

Mr. R. TREDINNICK begs to inform his Friends and the Public of his REMOVAL to the above COMMODIOUS ROOMS, in the Hall of Commerce, where he purposes to hold, in addition to his general Agency Business, PERIODICAL SALES, BY AUCTION, of SHARES in MINES, RAILWAYS, BANKS, CANALS, INSURANCE, and OTHER COMPANIES; also Reversions, Annuities, Bonds, &c., together with Estates, Houses, and Property of every description.

SHARES BOUGHT and SOLD ON COMMISSION, and MONETARY MATTERS of every kind NEGOCIATED; Statistical and General Information afforded gratuitously, upon personal application.

Mr. T. offers to the mining world the opportunity of exhibiting in his Public Sale Rooms, Reports, Plans, Sections, and Specimens of Mines and Mineral Districts, whether situate in the United Kingdom, Foreign, or Colonial Possessions, upon forwarding the same, free of expense; as also Plans, Sections, &c., of Estates, Houses, and other Property for Sale.

FROM FAWNOG MINE, MOLD, FLINTSHIRE.

VALUABLE MACHINERY AND MATERIALS FOR SALE, BY PRIVATE CONTRACT.—A 60-inch STEAM-ENGINE, 10 ft. stroke in the cylinder, and 9 feet in the shaft, with case, top and bottom, bright geering, double cateract parallel motion, cast-iron condensing cistern plunger and condenser, all very complete, with first piece of main-rod and connection.

This engine was made at the Hawarden Iron-Works, about five years ago, is highly finished, and an excellent working engine.

An 18-inch HIGH-PRESSURE ENGINE, 4 feet stroke, with fly and spur-wheels, winding cage, &c., complete.

SEVEN CYLINDRICAL BOILERS, from 29 to 35 feet each in length, and 4½ to 5½ feet diameter, in good repair, with steam and feed connections, fire doors, bars, bearers, &c., complete.

A LARGE QUANTITY of PUMPS of the following sizes:—19, 17, 16, 13, 8½ and 6 inches bore.

PLUNGER POLES, 18, 14½, 7½, and 5 inches diameter.

WORKING BARRELS, 17, 16, 15½, 13, 12½, and 7½ inches bore.

Also, the capstans, shears, balance-bob, cathead, ropes, chains, smiths' tools, and all the other materials requisite for working a mine.

Application for prices and particulars to be made to the manager, Mr. Robert Williams' Ty'ntwll, near Mold, Flintshire.—Mr. William Bowen, the agent on the mine, will show the lots.—Fron Fawnog Mine, Oct. 29, 1850.

VALUABLE MINERAL PROPERTY TO BE IN PART OR WHOLLY DISPOSED OF.—This most desirable METALLIFEROUS SETT, consisting of nearly 2000 acres, is situated in one of the renowned mining districts of central WALES. One discovery of SILVER-LEAD ORE, made upon it some few months ago, was considered of so singular and promising a nature, that a brief account of it was then published, and subsequently copied into most of the leading papers of the kingdom. Since that period a shallow sink has been made on the lode, which is 6 feet wide, traversing a beautiful soft whitish killas. The analysis of the ore, of which there is about 20 tons on the bank, gives 75 per cent. of lead and 80 ounces of silver to the ton; indeed, the last assay of the ore, found at about 7 fathoms from the surface, gave the extraordinary quantity of 200 ounces of silver to the ton. There is a fine mixture of lead ore at the bottom of the present shallow shaft. The mine is but 9 miles (of good turnpike-road) from the shipping port, and a fine stream of water runs close past it, offering every facility for the development of its invaluable mineral resources.

For further particulars apply (post-paid) to "X. Y. Z.," at the office of the *Mining Journal*, 26, Fleet-street, London.

WHEAL OAK.—In 1080 shares, of Twenty-five Shillings each.

CONDUCTED STRICTLY ON THE COST-BOOK SYSTEM.

A GENERAL MEETING of adventurers will be HELD at the Mine on Thursday, the 7th day of November, at Eleven o'clock precisely. No applications can be received after Tuesday next, the 5th November, for the few remaining shares, and such only to the purser, Mr. John Trethowan, Little Falmouth, Flushing, Cornwall. A remittance must at the same time be made to Messrs. Tweedy and Co., bankers, Falmouth, when the necessary transfers will be immediately transmitted; and should all the shares be previously allotted, the bankers will return the money forthwith, without charges of any description.

WEST PHŒNIX MINE.—Notice is hereby given, that NO FURTHER APPLICATION FOR SHARES will be RECEIVED after THURSDAY, the 14th day of November inst. By order of the Committee,

Dated Exeter, Nov. 1, 1850. CHARLES COLLINS, Purser.

WEST PHŒNIX MINE, in the parishes of LINKINHORNE AND ST. CLEER, NEAR LISKEARD, CORNWALL.

At a Meeting of Shareholders, held at the offices of the Company, No. 14, High-street, Exeter, on Monday, the 14th day of October, 1850,

JEFFERY LANG, Esq., M.D., *Chairman.*

Several reports and other documents having been read, whereby the evidence is conclusive and undeniable, as regards the West Phœnix lode being the same as the Phœnix, on which an immense quantity of rich ore is now raising; and as it is fully demonstrated to this meeting that similar large deposits positively exist in the West Phœnix sett, and at a very shallow depth,—

Resolved,—That the mine be proceeded with immediately, and that the utmost economy be observed in carrying on the works.

Resolved,—That a committee be appointed to carry such object into effect, consisting of Jeffery Lang, Esq., M.D., John Porter, Esq., Edward Suter, Esq., Mr W. Milton, W. Whitchurch, Esq., Mr. C. Titherley, Mr. Henry Vatcher, John Symons Higgs, Esq., Chas. Richards, Esq., Mr. William Channing, Mr. W. Luxmore Jones, Robert Serjeant, Esq., Mr. Wm Balle—the committee having offered their services gratuitously.

Resolved,—That an early day be fixed by the committee for closing the share list.

Resolved,—That the best thanks of the meeting be given to the chairman for his able conduct in the chair. (Signed) JEFFERY LANG, M.D.

This invaluable mine adjoins the Phœnix, whose riches as a copper and tin mine now prove enormous. The lodes in the West Phœnix sett are parallel, and not far from the south and West Caradon Mines—the shares of the former originally cost £5, and now selling at £290; the latter £20, and now selling at £95. The two great cross-courses of South and West Caradon pass through this sett. The lode in West Phœnix sett is large, varies from 10 to 20 feet wide, strong and well-defined, is the same lode as the Phœnix, and carries precisely the same indications. It is also ascertained that a rich course of ore now exists in the 13 fathom level, 14 inches wide, and worth from £90 to £100 per fathom. The small sum of £1150 has been paid for the sett, which will be reimbursed.

The reports, from Evan Hopkins, Esq., No. 13, Austinfriars, London, and Captain Samuel Seccombe, agent of the Phœnix Mine, demonstrate satisfactorily that the West Phœnix Mine is no speculation, but only requires capital to develope the riches which are positively known to be in this sett. The ground being easy, the work will be rapidly accomplished. Five hundred and fifty shares are only now issued to the public—the remainder of the 1024 are reserved to the owners of the mine, agreeably to the conditions of the Cost-book. The calls will not exceed £1 per share every two months, and it is estimated that before £7 or £8 per share is expended the mine will be in rich and profitable working. A 30-inch cylinder steam-engine has already been purchased. The mine will be worked with the strictest economy, under the superintendence of the best practical agents. A large number of the shares are already taken up.

Respectable parties willing to secure a few of the remaining shares are instructed to make early application, accompanied with a reference, to James Lane, Esq., 80, Old Broad-street, London; or to John Symons Higgs, Esq., 2, Chichester-place, Exeter.

WANTED,—A double power CONDENSING ENGINE, to drive machinery from 8 to 100-horse power; length of stroke of steam cylinder to be from 7 to 10 feet long.—Apply by letter (post-paid), with every particular, to Mr. P. Higson, Crompton-road, Macclesfield.

WANTED, a SECOND-HAND HORIZONTAL ENGINE, in good repair; cylinder from 18 to 20 inches diameter—stroke 2 feet 6 inches.—Apply to "H. C. L.," at the office of the *Mining Journal*, 26, Fleet-street, London.

STEAM-ENGINE FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, a 32-inch cylinder STAMPING ENGINE, single acting, 9 feet stroke in cylinder, with steam case, boiler, about 11 tons, and axles and frames for 72 heads.—Applications to be made to Hocking and Loam, engineers, Redruth.

Dated June 26, 1850.

TO FOREIGN CAPITALISTS OR OTHERS.—TO BE DISPOSED OF, a very VALUABLE PATENT FOR FRANCE, and also ONE FOR BELGIUM, both taken out in the year 1848, for an Invention for which Letters Patent had previously been granted for Great Britain and Scotland, and which is now in successful operation in many of the large mining districts. The price at which the above would be sold will yield a very large return upon the purchase-money.

Full particulars may be obtained by addressing a letter (pre-paid) to "L. M.," at the office of the *Mining Journal*, 26, Fleet-street, London.

TO FOREIGN IRON AND COAL COMPANIES.—A Gentleman, now and for 12 years past engaged with one of the largest and most successfully conducted companies in Wales, is desirous of an ENGAGEMENT ABROAD. Salary a secondary consideration: the first references.—Address "H. L. D.," at the office of the *Mining Journal*, 26, Fleet-street, London.

BORROWDALE BLACK-LEAD, OR WADD MINES.—TO BE LET a MOIETY of these celebrated MINES: they are worked at a very small expense, and offer great inducements to any parties willing to prosecute the operations with energy—the discovery of a good vein being in itself a fortune.

For particulars apply to H. D. Francis, 4, Monument-yard, London.

EAST EDMONDSLEY COLLIERY.—TO BE SOLD, OR LET, the CURRENT-GOING COLLIERY of EAST EDMONDSLEY, in the county of DURHAM, containing 174 acres, or thereabouts, held under leases, of which about 30 years are unexpired. The coal has been sold in the markets as "Gibson's Wall's-End" and "North Durham Wall's-End." The purchaser or lessee will be required to take the engines, &c., at a valuation, which will be of small amount.

For further particulars apply to Mr. William Barkus, viewer, Lowfell, Gateshead.

SHARES IN A COPPER MINE are OFFERED to CAPITALISTS on ADVANTAGEOUS TERMS. The MINE is situated in one of the most favourable districts in the WEST OF ENGLAND: is complete in all needful machinery, and will soon yield an ample return for the capital invested. Reference may be made to Mr. Evan Hopkins, C.E., F.G.S., &c., Consulting Mining Engineer, 13, Austinfriars, London.—Apply to Messrs. Cornthwaite and Wilson, solicitors, 14, Old Jewry Chambers, London.

MR. J. C. NESBIT, F.G.S., F.C.S., CONSULTING AND ANALYTICAL CHEMIST.

LABORATORIES—38, KENNINGTON-LANE, LONDON.

Mr. NESBIT gives PRIVATE INSTRUCTIONS in CHEMICAL ANALYSIS, and may be consulted on subjects connected with the Composition, Working, or Assaying of Minerals.—Analyses of Minerals, Slags, Soils, Manures, &c. &c., performed as usual, on moderate terms.

MINING SHARES.—JOHN DAVIES, No. 38, TOWER-BUILDINGS, TOWER GARDEN, LIVERPOOL, begs respectfully to inform the public that he is prepared to BUY and SELL SHARES in all DIVIDEND-PAYING MINES, and to give every information relative to such property.

MINING—COMPANIES of respectability requiring OFFICES for CARRYING on their AFFAIRS in LONDON, including MANAGEMENT, may be ACCOMMODATED on application to Mr. FENTON, No. 5, WHITE HART-COURT, LOMBARD-STREET.—SHARES ON SALE in those well-known dividend-paying Mines, South Caradon, Providence, Spearne Consols, Carn Brea, Wheal Rose, &c., and a FEW for DISPOSAL in those promising adventures Wheal Arthur, Wheal Oak, Warleggan Consols, South Relistian, &c.

MINING PROPERTY.—BUSINESS transacted in every description of MINING PROPERTY, SHARES BOUGHT and SOLD, ADVICE GIVEN to PARTIES as to INVESTMENT, ADVANCES of MONEY MADE on this DESCRIPTION of PROPERTY, Statistics given on Mines, and the earliest information obtained from the mineral districts.—Apply to DURRANT & CO., Mining Sharebrokers, 58, Lombard-street.

MINING OFFICES,—48, THREADNEEDLE-STREET, LONDON.—Messrs. FULLER & CO., beg respectfully to inform the public that they are in a position to BUY and SELL SHARES in all the DIVIDEND-PAYING MINES, and have on hand Devon Great Consols, North Pool, Russell, North Levant, South Carn Brea, Warleggan Consols, Wheal Elizabeth, Harris, &c.

WANTED—East Russells.—Nov. 1, 1850.

MINING OFFICES, ST. MICHAEL'S CHAMBERS,

ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

Mr. R. TRIPP, MINING AGENT, has for SALE SHARES in most of the best DIVIDEND-PAYING MINES, and others, including—Wheal Margaret, Botallack, South Wheal Frances, South Wheal Basset, South Caradon, West Caradon, Treviskey and Barrier, North Pool, Tincroft, Hennock, Treville, Tamar Consols, Drake Walls, West Wheal Treasury, Spearne Consols, &c.—FOREIGN: Linares, Santiago, United Mexican, &c.; and is a BUYER of Devon Great Consols, Wellington, Alfred Consols, St. Aubyn and Grylls, Wheal Mary Ann, Wheal Reeth, and Trelawny mining shares.

MINES.—MOLYNEUX & CO., 6, FINSBURY-PLACE SOUTH, and 6, WEST-STREET, FINSBURY-CIRCUS, have SHARES FOR SALE in DIVIDEND-PAYING and OTHER MINES, which will ensure to capitalists the safest and most unexceptionable investment.—Office hours from Ten to Five o'clock.

MANUEL AND CO., MINING AGENTS, are instructed to SELL in the following DIVIDEND-PAYING MINES:—South Frances, Wheal Seton, Treviskey, South Basset, &c., also in other mines, including—Runnaford Coombe, Great Wheal Michell, West Wheal Rose, and Craig-y-Mwyn, &c.

Office, 42, Fish-street-hill, London.

MESSRS. BOXALL & CO., MINING SHARE DEALERS, *5, CROSBY HALL CHAMBERS, BISHOPSGATE-STREET.*

CREFT AND CO., 1, ROYAL EXCHANGE BUILDINGS, LONDON, can always BUY or SELL every description of MINING SHARES. WANTED, Peter Tavy and Mary Tavy shares, for which a large premium will be given.

JAMES LANE, MINING SHARE DEALER, 80, *OLD BROAD-STREET, LONDON.*

MINING COMPANY OF WALES.—PROSPECTUSES, containing REPORTS on the MINES and QUARRIES of the COMPANY, Terms and Conditions for its Government, &c., may be had of ST. PIERRE FOLEY, Secretary, to whom letters on the allotment of shares, and on the general business of the Company, are to be addressed.—Offices, 24, Lincoln's Inn-fields, London.

ASSAYING AND ANALYSIS.—ASSAYS and ANALYSES of MINERALS, METALS, SOILS, FURNACE, and all other MANUFACTURING PRODUCTS. INVENTORS and INTENDING PATENTEES assisted in PERFECTING any INVENTION involving an intimate knowledge of chemistry.

INSTRUCTION in all branches of ASSAYING, ANALYSIS, and METALLURGICAL and MANUFACTURING CHEMISTRY.

Communications to be addressed to Mr. Mitchell, 23, Hawley-road, Kentish Town.

BICKFORD'S PATENT SAFETY FUSE.—The Patentees of the ORIGINAL, and only real, SAFETY FUSE, beg to inform Merchants, Mine Agents, Railway Contractors, and all persons concerned in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE *has now a thread wrought into its centre*, which being patent right, infallibly *distinguishes it from all imitations*, and ensures the continuity of the gunpowder. The Safety Fuse is now protected by a Second Patent, and manufactured by greatly improved machinery.

BICKFORD, SMITH, DAVEY, Camborne, Cornwall.

STEAM-ENGINE INDICATORS, OIL TESTS, COUNTERS, SALINOMETERS, &c. &c.—Mr. W. KELD WHYTEHEAD, CONSULTING ENGINEER, begs to inform the Profession that he has a STOCK of these INSTRUMENTS always ON SALE.—Plans and Mechanical Drawings of every description Copied, Reduced, and Lithographed—Working Drawings of Land and Marine Engines and Machinery designed on the most approved principles—Engines Indicated, and their Working Order Improved, wherever practicable.

OFFICE—No. 69, CORNHILL, LONDON.

THE COAL TRADE.

An interesting event in connection with the coal trade occurred last week at Newcastle-upon Tyne. We refer to the dinner given in honour of Mr. Hugh Taylor, chairman of the coal trade, which was presided over by Matthew Bell, Esq., M.P., supported by a large number of gentlemen anxious to do honour to their respected guest. The health of Mr. Hugh Taylor was proposed by the chairman in terms expressive of his high respect for his character, and was received with corresponding warmth and cordiality. In acknowledging this tribute of respect, Mr. TAYLOR gave a brief retrospect of the history of the coal trade. He said it was about the year 1290 that they first heard of its operations in this district. Complaint was made, at that time, of the injury inflicted by coal smoke upon the metropolis. Little record of the trade was in existence of earlier date than 1665, at which time the annual vend amounted to 660,000 tons. Coming down to 1710, they found the Legislature restricting what was called the "monopoly" of the coal trade; but in 1738 Parliament thought it necessary again to legislate for this purpose, and to give the City of London power to fix the price of coal—still the object was not answered. The coal-owners tried, of course, to obtain a remunerating price for their article, and the consumers complained of their having, as they termed it, a monopoly. About the year 1800 the coal trade was placed in great jeopardy, and the coalowners were in danger of being sent to prison. Mr. Clayton, the town clerk of Newcastle, father of the present town clerk, showed the Legislature that no monopoly, in the offensive sense of the word, existed—that the coalowners of Northumberland and Durham had no monopoly but what consisted in supplying the best article of the kind at the lowest remunerating price. (Applause.) In 1829, there was another Parliamentary inquiry, the greatest of all the inquiries to which the coal trade had given rise. It was courted by the coalowners, and conducted by Mr. Brandling, Mr. Buddle, and himself. Mr. Brandling stated the details of the trade, showed that it was no monopoly, that it was a pursuit of great risk and difficulty, and of little profit. Mr. Buddle followed, and little was left for him (Mr. Taylor) to say; he, however, was the first who attempted to show the annual consumption of the country, and the limits of the northern coal-field, extending from the Coquet in the north to Castle Eden in the south. He referred to the inquiries into the ventilation of coal mines, in which Messrs. Buddle, Wood, Johnson, and Forster had distinguished themselves, and said that collieries had now a supply of pure air 20 times greater than Mr. Buddle considered essential to safety. He regretted that the trade, generally, was not profitable in proportion to the enterprise of the owners. Fortunes had more frequently been lost than gained in coal mining, from the time when "Master Beaumont adventured into our mines with his 30,000*l.*," and "within a few years consumed all his money, and rode home on his light horse," with empty saddle-bags, down to the present day. The only thing in favour of the modern coalowner was the great and increasing export of his commodity. This was a satisfactory feature of the trade, and the increase was likely to go on. The vend, he had already stated, amounted in 1665 to 660,000 tons.

	COASTING.	OVERSEA	TOTAL TONS.
In 1800 it amounted to	2,381,986	138,089	2,520,075
In 1825 to	3,309,386	178,544	3,487,930
In 1849 to	5,610,058	1,862,551	7,472,609

There had thus been an increase, since 1800, of 3,228,062 tons upon the coast-wise shipments, or 135 per cent.; of 1,724,462 tons upon the foreign shipments, or 966 per cent.; and of 4,952,534 tons upon the total shipments, or 196 per cent. This was an immense extension of our foreign trade; and if an equalisation of duties could be obtained in France, placing the English coalowner upon a level with the Belgian (loud cheers), the trade with the continent would be still more extended. Mr. Matthew Forster, the Member for Berwick, had been indefatigable in his efforts to promote this desirable object. He had seen Lord Palmerston, Lord Normanby, and the French Minister upon the subject; and a confident expectation was entertained that the measure would ultimately be carried. The chairman had alluded to the depressed state of the trade; he (Mr. Taylor) had not seen it in so bad a condition for many a day. For the last few years it had kept getting worse and worse. It depended, however, upon themselves whether this downward progress should go on, or the trade should prosper. If a dictator were appointed, with full power to act, he might change the whole aspect of the trade in a fortnight. Instead of the money flowing out of their pockets, it would gradually flow in. He said gradually, not rapidly—and so much the better. Trusting to see the day when prosperity would dawn upon the trade once more, he cordially thanked his friends for their kindness.

Mr. LIDDELL, in referring to the speech of Mr. Taylor, said, that though the coalowners had been charged with monopoly from the earliest periods, yet in those days the trade was at least profitable to those engaged in it. It was not so now, even though a number of burdensome imposts had been removed, and an increase of sales to the amount of 196 per cent. had taken place. He attributed the depression so much complained of to the want of a better spirit and nearer agreement among the coalowners; if this existed, the trade would, in his (Mr. Liddell's) opinion, quickly revive from its present deplorable condition.

On the subject of colliery explosions, Mr. BELL (the chairman) took occasion to state that, in Northumberland and Durham every precaution was taken to guard against accidents; and, looking at the extent of underground workings, he was surprised that more did not occur. He had no objection to the Inspection of Mines' Bill, provided competent and judicious inspectors were appointed; but expressed his conviction that the Members of the Legislature would find themselves in a better atmosphere at the bottom of a Durham and Northumberland coal-pit than in the present House of Commons, and "in not much inferior company!" [There is no accounting for tastes. Coming from a coalowner, the compliment may seem a very natural one, and her Majesty's Commons are left to digest it as they best may.]

We quote the following remarks on this festive gathering from the *Newcastle Guardian*, which having a direct bearing upon the question between the coalowners and the public, may be read with some interest. In allusion to the supposed necessity for a better agreement among coalowners, it says:—

"There is the greater difficulty in bringing the coal trade to one mind, from the dissimilarity of their circumstances and interests. No two collieries are alike—the means of the owners, the quality of the produce, the extent of the workings and the royalty, the machinery and workmen employed, are in every case different; and a limitation which would be scarcely felt by one, would be fraught with ruinous consequences to another. But on this point we will not dwell, for in our opinion, if the scheme was as practicable now as it appears once to have been, it would be injurious rather than beneficial to all the parties concerned. Up to 1843, the vend regulations were as strictly enforced as they could be, but there was no power to prevent the sinking of new collieries here and elsewhere, and just in proportion as the restriction in the supply raised the price, was the temptation to speculative coal-mining increased, and existing owners increasing the capacity of production so that they might obtain a larger vend. How this operated will be seen from the following statistics, which we give on the authority of the *Economist*, not having our own memoranda on this subject at hand:—'In 1831, for every 1000 chaldrons of coal a mine could produce, the Newcastle owners were allowed to sell 910 chaldrons; in 1822, 730; 1834, 640; 1835, 768; 1836, 765; 1837, 770; and from that it fell steadily, until in 1842 the vend was 501; and in 1843 but 414 chaldrons for every 1000 the mine could produce; so that in 1831, 90 chaldrons were kept in the mine as a contribution to monopoly; and in 1843 so much had the whole production by increase of mining increased, that 586 tons out of every 1000 had to be kept.' We cannot wonder that, after such a result, the system which had produced it should be abandoned. Why then seek to revive it? Is it not obvious that the severe competition which has prevailed of late years, and which has led to extensive ruin and unutterable misery, had its origin in the vend regulations? Every man who chose to embark in the trade was promised a certain price for his article, an ingenious and complicated plan being in operation for realising the promise. Each colliery was viewed, its power of production registered, and as the market rose and fell, the proportion of sale to production was fixed by a supervising committee of the trade. What was the consequence? Royalties were leased, and shafts sunk by people who knew nothing about the trade upon which they were entering; men of straw obtained assistance and accommodation from joint-stock banks; and we need only to look around us to see the wrecks which this deplorable folly and guilt have left on every hand. Only let the same arbitrary regulations be enforced, and something like a uniform price established, and the same illicit spirit of adventure will be created—followed in its turn by the devastation and loss from which the trade and district still suffer. Depend upon it, the mining interests will never be permanently promoted by a system which necessarily affords facilities for jobbery and favoritism, fraud and injustice, and which is alike hostile to an enlightened public opinion and to the general weal.

"As we have already intimated, the public have a deep interest in this question; and we are much mistaken if the power which prevented the price of corn and cattle from being adventitiously increased for the benefit of a class, will permit the coalowners to fix arbitrarily the price of coal. The thing is quite out of date; what the coalowners must look to is, not a restricted vend, but an augmented demand. And on this branch of the subject the facts and figures adduced by Mr. Hugh Taylor are most encouraging. The trade is increasing, and will continue to increase—aye, even in spite of the infatuation of many most deeply interested in its prosperity; and if only we could get the differential duties now levied in France abolished, and the iniquitous City tax either extirpated or applied to the building of quays (so as to save the expense of lighterage), then the coal trade would rise from its distress and depression, capital, enterprise, and skill would be rewarded, labour would be more abundant and better remunerated, and the whole of these northern counties, in all their mighty and varied interests, would enjoy once again a high state of prosperity."

A report made to the Legislature of Holland states the successful progress of the works for laying dry the Haarlem Meer. The advances made amount to 666,000*l.*, and a further sum of 160,000*l.* is to be raised, of which the expenditure of 100,000*l.* can be spread over several years. It is expected the whole undertaking will be completed in 1854.

CHEAP GAS.

On Wednesday, the second half-yearly meeting of the shareholders in the Great Central Gas Consumers' Company was held at the London Tavern. Upwards of 400 shareholders were present.—THOMAS DAKIN, Esq., the chairman of the company presided.

The CHAIRMAN expressed his regret that he had been unavoidably absent from the extraordinary general meeting held a short time since. When that meeting took place, he was in Ireland, in his capacity of deputy governor of the Irish Society, upon a visit of inspection of their estates in the sister country. That meeting had been held at the instance of the directors to obtain authority to borrow money upon mortgage, if it should become necessary. The meeting had manifested their confidence in the discretion of the directors, by unanimously conferring upon them the power they asked. The directors adopted that expedient as a measure of precaution only; they felt it was a sound principle of action, when only applied to the conduct of individuals or companies, that they ought not to borrow money if, by increased activity, they could obtain from their own legitimate resources the money required. The directors had acted upon that principle. They had made an appeal to their shareholders, which had been met by a prompt response, and they had abstained from exercising their borrowing powers. (Cheers.) He was happy to say the report the directors would present was of the most satisfactory description. The company had been stigmatised as a paper company, and it had been boldly prophesied by their enemies that a foot of gas would never be supplied, and that a single pipe never would be laid. (Laughter.) These false prophets had failed in their predictions, and the fond hopes of the gas monopolists had been destroyed by the triumphant success of the new company. (Loud cheers.) The present history and the future prospects of the company might be read by their opponents in the magnitude of the works at Bow, in the enormous quantity of mains and pipes laid throughout the City, in the number of gas consumers who have already received, and the number who were waiting to take the gas as soon as they could be accommodated. Let their opponents contemplate these facts as the best answer that could be given to the imputations cast upon them of being a mere paper company, having no real or substantial existence beyond the paper on which the prospectus had been written. (Cheers.) Perhaps he was deficient in that acute degree of sensitiveness which lead some persons to resent the calumnies and slanders heaped upon men who, anxious to carry out honourable ends by honourable means, had the misfortune to thwart the objects of others whose real objects could not be readily avowed. He had patiently endured the assaults made by the gas monopolists and their friends upon the new company, conscious that time, which effects such wonderful revolutions in human affairs, would obtain for the company that place among the public establishments of the City, which, from its magnitude, its importance, and its usefulness, it had a right to occupy. The introduction of gas as a means of furnishing artificial light for domestic and trade consumption, was undoubtedly one of the most important elements in human progress, but it had its disadvantages. When manufactured in densely populated neighbourhoods, by the old and imperfect methods of manufacture, it loaded the atmosphere with noxious vapours, and scattered disease among the surrounding inhabitants. (Hear, hear.) Public attention had been recently directed to the sanatory improvement of the City, and it was absurd to suppose that the vigilance of legislation, which interdicted petty nuisances in crowded parts of the metropolis, would tolerate in the heart of the City the existence of a gigantic gas factory, which was expressly classed by the Building Act amongst the noxious and dangerous trades. The new company's works, among the chemical factories at Bow Common, were free from these objections. The Commissioners of Sewers, who, with their officer of health, were laudably employed in removing from the City all nuisances prejudicial to the public health, must hail with satisfaction upon sanatory grounds, apart from economical considerations, the new company, which had already supplied to the citizens a large amount of gas, manufactured at Bow Common, in substitution for that which would otherwise have been produced in the most crowded part of the most crowded city in the world.—The SECRETARY then read the report, which was as follows:—

You are called together, under the provisions of the company's Deed of Settlement, to the second half-yearly meeting of the company. The two extraordinary general meetings, so lately held, under special circumstances, at which full reports were made on the state of the company's affairs, and progress of the works, render it unnecessary to go into a lengthened detail in our present report, which may be properly limited to the presentation of the following reports from the different officers of the company—viz., the engineers, the surveyors, and the auditors. The ordinary channels of public information will have acquainted the shareholders with the many sources of persevering opposition with which the company has had to contend, but which has hitherto totally failed in its main object. The reports, which had been given at length in the daily journals, of the legal proceedings instituted by the Chartered Gas Company, will have informed the shareholders how little they have to apprehend from this source; but as at present there is a negotiation for settlement going on, at the suggestion of the Lord Chancellor, the directors do not deem it expedient, pending the issue, to further advert to the subject.

In addition to the statement in the engineers's report, the directors have the satisfaction to state that although in Mr. Burl's, the secretary of the Chartered Company, affidavit used in the last proceedings, the total number of consumers in the City is sworn to by him at 5500, which, however, your directors cannot think a correct statement, we have the satisfaction to inform you that up to this time 4660 services have been laid on to your mains, that 2800 meters have been fixed to consumers requiring new ones, and that more than 15,000 lights are now burning on the premises of the various customers, nearly the whole of which are most satisfactorily supplied with gas, both as to the brilliancy of the light and the quantity required, and that within the period of six weeks the whole of the contracting consumers will be supplied. The delay which has occurred in the completion of the works, necessary for the entire supply of the consumers, has been a source of much anxiety to your directors, and has been a subject of constant remonstrance by them to the contractors.

The financial statement embraced in the report is necessarily limited by the Deed of Settlement to a period six weeks anterior to this meeting; but the directors have the pleasure to say, that since that time, 8500*l.* has been received upon the last call, as well as upon calls in arrear. The directors confidently hope, that from the continued support they are thus receiving from the shareholders, that it will not be necessary to borrow the sum of money which they were empowered to take upon mortgage, by the resolution of the extraordinary general meeting of the 14th of August, and confirmed by a subsequent meeting of the shareholders, of the 4th of September. The usual statement of the attendances of the directors at the board meetings, and on committees, for the last half-year is herewith presented. By the provisions of the Deed of Settlement, the following gentlemen go out of the direction by rotation; they offer themselves for re-election:—Messrs. Dakin, Gabriel, Bennoch, and Bovill.

The directors have been occupied during the past week in considering the necessary staff of officers for carrying on the operations of the company, and receiving applications; and they have the satisfaction of stating, that the principle they had adopted for paying a moderate salary, and making the larger emolument dependent on the success of the company, has been acceded to by the officers appointed, showing their confidence in its ultimate results, and securing their zealous co-operation in the conduct of the business.

Mr. HALL moved the adoption of the report.

Mr. THOMPSON seconded the motion, which was unanimously agreed to.

Mr. MACHIN said, he did not find in the report any allowance provided for the directors.—The CHAIRMAN said, that was a question entirely for the consideration of the shareholders.

Mr. CHARLES PEARSON proposed a remuneration of 500*l.* a year from the commencement, until they should, at the price of 4s. per thousand feet, pay the dividend of 10 per cent. out of the profits. After which he would propose an allowance of 1000*l.* per annum, with a further addition of 500*l.* per annum upon their paying 10 per cent. dividend, after reducing the charge to 3s. 4d. per thousand feet, which he was confident would be effected within two years from that day. (Great cheering.)

Resolutions to that effect were passed unanimously.

Mr. GEORGE VIRTUE was appointed one of the auditors.

Mr. CROLL, the engineer, said, when they commenced the manufacture of gas, they instructed various gas-fitters to undertake the fixing up of meters at the prices stated, which the company considered liberal. All these gas-fitters were employed to the time of this meeting. They might have been in possession of a larger quantity of gas, and a much larger quantity of gas-fitters, but it was not thought requisite, as they only possessed one-half of the retorts; the other half had not yet come forward, the disappointment arising from the founders in the country. Still, the retorts they now possessed would have enabled them to manufacture one-third more gas than they were at present distributing. Supposing they had taken the amount of consumption as equal to the manufacture now existing, one foggy day, or any occurence of that kind, might have had a most fatal effect on the interests of the company. (Applause.) For this reason, it was considered by him best not to recommend the employment of an additional number of gas-fitters, but to let those who had commenced go on, without changing them, or driving them on to any greater exertions. When they received the additional number of retorts, which were expected by Thursday, he fully anticipated seeing the whole in operation, and ready for work in about 10 days afterwards. As soon as they were arrived at that position, he should recommend the directors to employ a larger number of fitters, in order to get gas for all the consumers. (Applause.)

A vote of thanks was passed to the Consumers' Committee, to which Mr. Hall responded. A vote of thanks was also passed to the chairman and directors of the company.

Mr. CHARLES PEARSON made a humorous speech in allusion to an intended excursion by the Blackwall Railway to Bow, for the purpose of inspecting the company's extensive works, on the 18th December, when he hoped to have the pleasure of the company of all the consumers, as well as shareholders, he promising that such good cheer would be forthcoming as would enable them to commemorate, *avec gaieté de cœur*, the completion of the company's works.—The meeting then separated.

BRITISH ELECTRIC TELEGRAPH COMPANY.—The first ordinary meeting of this company, for extending telegraphic communication on economical public principles, and for which an Act of Parliament was granted last session, was held on Monday at the offices, Lincoln's-inn-fields, when, after the appointment of directors, and settlement of the register of shareholders, the meeting was adjourned until next month, for certain negotiations to be completed.

LAMORNA STONE QUARRIES.—Mr. Freeman is working a stone at these quarries, intended for the Great Exhibition in London; it is 20 feet in length, and weighs upwards of 20 tons.

PROFESSOR TENNANT'S LECTURES ON MINERALOGY—SILICIOUS MINERALS CONTINUED.—No. IV.

Prof. TENNANT commenced his lecture on Wednesday, at King's College, by remarking that at his last lecture it would be remembered he had treated of quartz in a crystalline state, and had shown that the addition of some metallic oxide produced in rock crystal the different tints which transformed it into amethyst, cairngorm, and other stones. Wherever silica was obtained pure in quartz, it formed that beautiful white substance called rock crystal, an admirable specimen of which he held in his hand. But if there chanced to be diffused through the quartz from 1 to 3 per cent. of the oxide of manganese, the mineral became a beautiful rose amethyst; or a minute quantity of oxide of iron, a yellow cairngorm. Mr. Tennant exhibited specimens of each, as well as of one which, by a trifling admixture of a metallic oxide, was perfectly opaque; while, at the same time, upon examination, it would be found that it had the perfect crystallisation of the quartz of a transparent character. In a specimen of rock crystal, he directed attention to some beautiful prismatic colours within the mass, caused by the enclosure of a little air; and, therefore, whenever an appearance of this character was detected in stones of this family, they might be certain there was a flaw, or fracture.

The lecturer then proceeded to describe chalcedony, and its varieties. This mineral presented various shades of white, grey, yellow, brown, and blue. It was found plentifully on our coasts, in the beds of our rivers, and in the plains between our hills. In all these places water-worn flints might be found, many of which, when broken, would contain chalcedony. Flint differed but slightly from chalcedony; its colour was principally the result of animal matter, while chalcedony consisted chiefly of silica and alumina. It was only recently that much attention began to be paid to the structure of these flinty bodies, and to Dr. Mantell and Mr. Bowerbank, and particularly to the latter, the scientific world owed much in reference to this subject. Geologists had determined that there were three beds of chalk. In the uppermost were parallel layers of flints; the middle bed was more compact than the one above it, and the lower, or grey chalk, was still more solid, the two latter being destitute of flint. The flint chalk might be seen in the railroad cuttings and chalk pits of Kent. In the upper beds of chalk were, as he had already mentioned, horizontal layers of flints at regular intervals, but generally from 3 to 4 ft. apart. The flints themselves were sometimes 5 or 6 yards long; at others but a few inches, and more frequently at various sizes between the two extremes.

The lecturer here exhibited a great variety of specimens, and drew attention to their shapes. He first referred to those called ventriculities, or petrified mushrooms, from their bearing so close a resemblance to the edible fungi—inspection with the miscroscope easily showed their structure to be that of sponge. This was a most interesting question, and had given rise to some discussion amongst the learned. There were thousands of the mushroom and cup-shaped flints found, as it were, in beds, exactly like sponges at the bottom of the sea. Mr. Bowerbank was the first to make this discovery public, in a paper which he read in 1841, at the Geological Society, "On the Spongeous Origin of Moss Agates and other Silicious Bodies." He might explain that the moss agate of Oberstein was the flint of central Germany, the heliotrope that of India, and so on. Mr. Bowerbank stated, that having obtained a considerable number of polished specimens, he examined them as opaque objects, by direct light concentrated on their surfaces by the application of a convex lens, and generally he was able to detect the organic structures imbedded in them, and upon a minute and careful examination, he found that every specimen of the moss agates of Oberstein presented strong evidence of their spongeous origin. The structure and arrangement of the fibre of the sponge usually presented the appearance of maceration and disruption of its component parts, previous to fossilisation, the fibres apparently adhering together in confused and ropy masses, with here and there one or two in a better state of preservation. Sometimes, near the external surface of the original mass, small portions of the tissue were found, in so perfect a state as almost to deceive the observer into believing them to be fragments of recent sponges.

Parts of the sponge were to be found in all the intermediate stages between perfect preservation and nearly complete decomposition. The silicious matter in which these remains are imbedded usually presents a clear, and frequently a crystalline aspect, while the remains of the organised matter is strongly tinted with colour—light red, brown, and ochreous yellow, being the prevailing tints; and apparently milk white or light green fibres may be found. Sometimes the tubular fibre only is filled with colouring matter, while the sides are of a semi-pellucid or milky white.

The colouring matter is generally confined within the bounds of the animal tissue, leaving its surface smooth and uninterrupted; but occasionally the fibre is not only completely charged with it, but its surface is also slightly incrusted by it. The fibres of these specimens from Oberstein are tubular, and strongly resemble the *Spongia Fistularis* in that respect. In their arrangement of fibre, they closely resemble the sponges of commerce, and many of the Australian Keratose species. The geologists naturally objected to this doctrine, that the district in which Oberstein was situated was a volcanic one; and that, therefore, the organic constituents necessary to the sponge theory must have been destroyed. He (Prof. Tennant) confessed that at first he too was a sceptic; but, on paying a visit to Oberstein, he found that the moss agates did not occur in the true volcanic rocks, but in a debris between the rocks, in which also might be found all sorts of water-worn pebbles, such as are obtained on the coast at Brighton.

Mr. Tennant exhibited a number of specimens which had in them shells and fossil remains, which must have been entangled in the sponges previous to their being fossilised. The late Mr. Dixon, who had a most splendid collection of fossils and flint stones, found in the chalk formations, had made elaborate drawings of them, which had just been published in a work which he was preparing for the press at the time of his death. He said—"Very beautiful chalcedonies are found in chalk-pits, and at the top of the Downs. These cut and polish like the specimens on the shore. There are in my collection varieties which mineralogists have denominated *botyroidal*, from a resemblance to grapes; *reniform*, from a kidney-shaped appearance; and *stalactite*, from a dropping or columnar character."

Mr. Tennant, who had specimens exhibiting these peculiarities, then pointed them out to the students, and explained that agates, instead of being formed around an axis, like the crystals of quartz he had treated of in his former lecture, were formed by the material running into a cavity, and crystallising on the sides, and aggregating towards the centre. In many masses the orifice had been closed before a sufficient quantity of material had flowed in, and, of course, there was left a hollow, which destroyed the value of the stone, and caused it to be rejected by the lapidary. The true agates found in volcanic rocks, containing no organic structure, were formed subsequent to the elevation of the rocks, and the cavities were probably the result of collections of gaseous matter. Chalcedony was not a pure silica; it had about 90 per cent. of that material, and the remainder was made up principally of alumina, and sometimes of the metallic oxides. The centre of the agate was invariably perfectly pure, and often crystallised; small crystals of quartz and amethyst were frequently discovered in the centre. In some of the churches in Germany were preserved splendid specimens of agate and onyx. Onyx was a stone composed of two different layers of chalcedony, the one purer than the other; these were formerly used for cameos, and often cost from 100*l.* to 500*l.* cutting. Cameos were now cut from shells, such as the bull's-mouth shell, and these seldom cost more than 1*l.* In the British Museum was a magnificent collection of onyx cameos, but they had been under lock and key ever since the outrage of the miscreant who broke the Portland vase. He trusted, when the new room was opened, the trustees would allow the mineralogist again to have access to them. Many cornelians were nothing but chalcedony, coloured by artificial means. Red cornelion was made by burning chalcedony with iron filings. Onyx was coloured by similar expedients, such as immersing them in oil or honey, and then in sulphuric acid; and wherever the stone had absorbed the oil, or honey, a change of colour was produced.

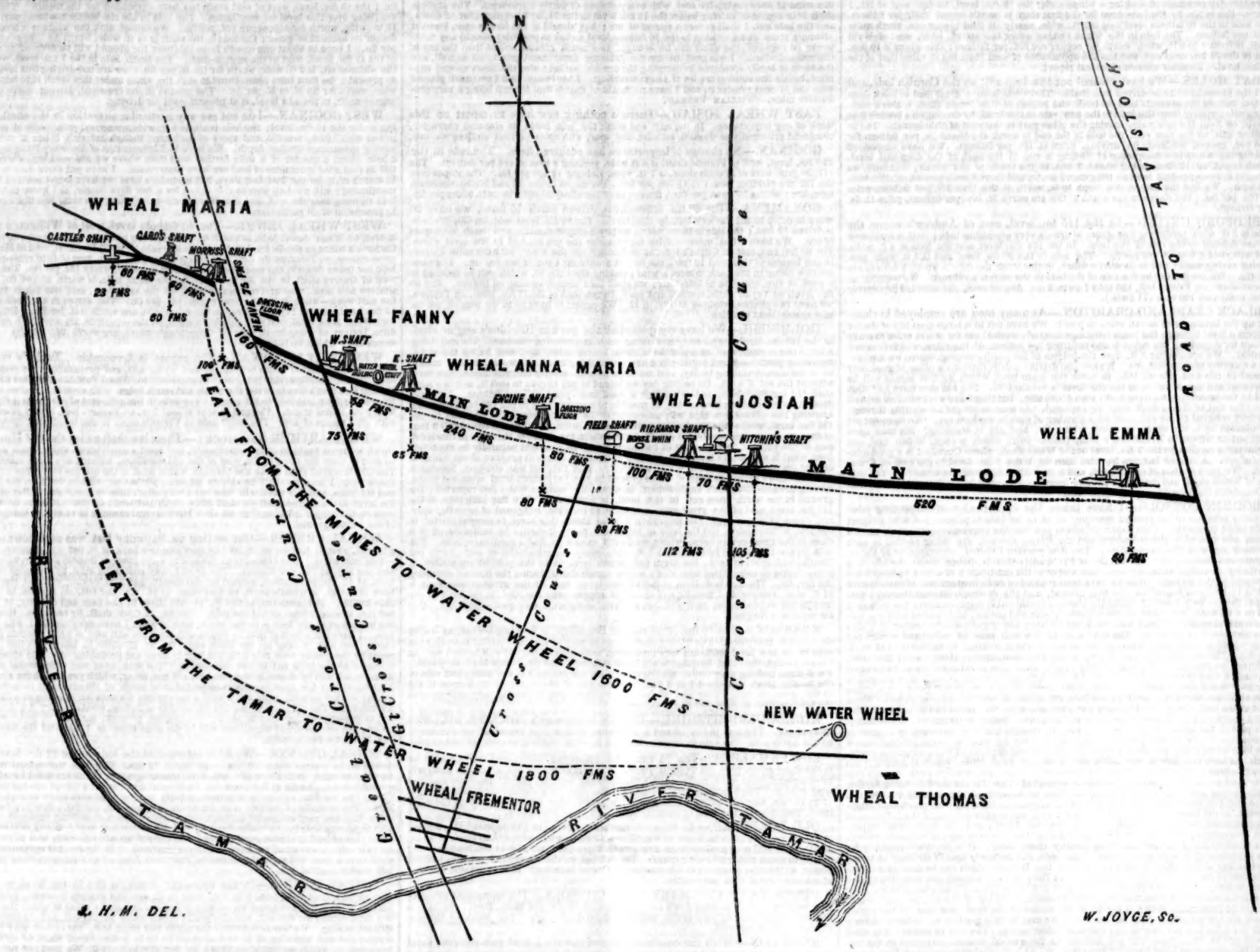
He had intended to refer the students to a large flint in the Museum, so large that it required two men to lift it. This was called a *paramondra*. These fossils, which were generally of large size, were manifestly of spongeous origin. Upon breaking them, particles of reddish and bluish chalcedony might be found. After speaking of the spongeous origin of chonnite and ventriculites, the lecturer concluded by stating that his next lecture would treat of opal, jasper, chert, and garnets.

EAST OF SCOTLAND MALLEABLE IRON COMPANY.—This unfortunate undertaking is now in the course of being wound up, at a great loss to the original promoters. It will be recollected that shortly after its constitution an attempt was made to effect an amalgamation with the Forth Iron Company for the works, for which it was modestly proposed that this company should pay a premium of 100,000*l.* To carry through the project and swamp the legitimate shareholders, large purchases of stock were made in the names of various parties, but the thing caught wind and became abortive. Out of these transactions several intricate and curious legal questions have arisen, and Mr. Sheriff Skene, of Glasgow, has just pronounced judgment in an action involving a most important principle raised at the instance of the Forth Iron Company against their late manager in Glasgow, Mr. Woodrow, for a sum of upwards of 4000*l.*, a balance alleged to be owing by him, but the payment whereof he resisted, on the ground that the sum in dispute had been applied under the direction of his constituents in the purchase of East of Scotland Malleable Iron stock, for the purpose of bringing about the amalgamation alluded to. The learned sheriff has sustained the defence so set up, and assoilzied Mr. Woodrow from the conclusions of the action; and should his judgment be well founded, which, from the strong and convincing reasons set forth in his note we see no room to doubt, the shareholders of the Malleable Iron Company, it is believed, will be enabled to recover from the Forth Iron Company the heavy arrears of calls due upon the stock so purchased, which will materially increase the residue for division among the unlucky shareholders.

THE DEVONSHIRE GREAT CONSOLIDATED COPPER MINES.

SKETCH OF THE PRINCIPAL WORKS—*September*, 1850.

We gave Mr. Murchison's very elaborate article on these mines last week, and now append the sketch we were compelled to omit. We need not say anything more in explanation; but Mr. Murchison wishes us to mention that the ore in sight is valued at 400,000*l.*, instead of 300,000*l.*, as stated, which would yield a further profit of at least 200,000*l.*



ON THE FORM OF RAILWAY AXLES.

In the *Mining Journal* of the 10th August, we noticed a communication on this subject, which was submitted by Mr. Thomas Thorneycroft, of the Shrubbery Iron-Works, Wolverhampton, to the Institution of Mechanical Engineers, Birmingham. At a meeting of members, held last week, a supplemental paper was read, in which the writer argued that the girder of a bridge and a revolving axle were somewhat alike in principle, and yet in the shape of the axle at present adopted the form of the girder had been departed from; the girders being parallel, the axles tapered. He contended also that the simple and only cause of fractures taking place behind the wheel arises from the shoulder. Axles reduced in the middle are unable to keep their form when any derangement of a train takes place, and that being bent beyond the point of elasticity, the wheels leave the rails, and the damage to the train is greatly enhanced. This view of the case was supported by Mr. Bowman, and Mr. Thorneycroft, sen., and opposed by Mr. Slate, Mr. Peacock, Mr. Ramsbottom, Mr. Cowper, Mr. Henson, and others.

Mr. SLATE remarked that the analogy sought to be established between the girder of a bridge and a railway axle did not exist; they were opposed to different forces, and the character of the fracture was totally different. Thus, girders invariably broke in the middle, and axles at the ends. Mr. Thorneycroft was, therefore, seeking to strengthen axles where strength was not wanted, a logical as well as a mechanical mistake. He thought that this was opposed to all philosophy and all facts.

Mr. PEACOCK remarked, that in addition to Mr. Slate's reasons for the parallel form of a girder, it must be remembered that the one was cast, the other wrought-iron. Taper a cast-iron girder like an axle, and you destroyed it from unequal contraction, before it left the workshop.—Mr THORNEYCROFT was proceeding to contend that the tapered form of an axle when subject to percussion was liable to bend, and the motion being continued a change in the character of the iron would ensue, and breakage would follow at the point where it was bent, when the CHAIRMAN requested the members to state if any cases of fracture of an axle in the centre (where it would bend), had come within their knowledge; he at the same time saying, that in all his experience no such case had occurred.—Mr. PEACOCK, Mr. RAMSBOTTOM, Mr. WRIGHT, of Saltley, and Mr. HENSON, confirmed the statement of the chairman. They had never seen a fracture of that character.—Mr. ALLEN had seen an axle broken in the middle, but the proportion was perhaps 500 to one.—Mr. HENSON presumed to say that the proportion was 10,000 to one; at the same time remarking that the experiments from which Mr. Thorneycroft had drawn his conclusions were different from the action to which an axle would be exposed in actual use.—Mr. BOWMAN contended that the parallel form of axles prevented deflection, a fatal thing to any structure of iron.—Mr. COWPER said that the theory of form was opposed to that advocated by Mr. Thorneycroft; the force of a blow on one wheel would be best borne by a triangular tapered axle, and the two wheels being liable to the like percussion, a double triangle, or, in other words, an axle tapered from both ends to the centre, was consequently the proper form.

After some remarks from the Chairman and others, as to the best method of avoiding shoulders, Mr. PEACOCK said that if the writer of the paper, in the experiments he had made, had closely followed the action of the disturbing forces in a railway train, and had given the blow of the ram to the wheel instead of the journal, he would have had a very different result. He contended that the tapered axle was the best, and could not, either from the reasoning or the experiments of the writer, adopt his doctrine.—Mr. THORNEYCROFT, sen., contended that it was the want of rigidity in the axle that caused it to break at the wheels. The tapered axle deflected, and the parts at the wheels being held firm, snapped off there, in consequence of this deflection. He was of opinion that the parallel form was the most philosophical shape for axles.

Mr. RAMSBOTTOM said that the conclusions of the writer were so different to all his theory and practice, that he could not forbear saying a word or two. He had always been taught so to apportion the strength of the parts of any article as that it would be impossible to lay a finger on any point and say, "Here the fracture will take place." If this could be done, the form was mechanically defective. If in railway axles the disturbing force was always parallel to the axis then the form contended for by Mr. Thorneycroft would be best, but the percussion was generally on the lower flange of the wheel, and the force of the blow travelled in an oblique direction, and naturally fell upon the point of the axle, just inside the opposite wheel; hence the necessity for increasing the strength of this part, rather than of adding weight of metal to the centre, where it is not wanted.—Mr. M'CONNELL recommended Mr. Thorneycroft to make further experiments on this subject, observing that the weight of the axles should be the same in the parallel and tapered forms, not that a parallel axle should be reduced, and then tested against an axle some 35 lbs. heavier. It would be well also, if the blow should be given to the wheel instead of to the journal, where in reality it never fell.—Mr. THORNEYCROFT expressed his willingness to make these experiments, and communicate them to the next meeting. His only object was to arrive at the truth, and probably the suggestions of the chairman would enable him to throw some additional light upon an important subject.

New Patents.

SPECIFICATIONS ENROLLED DURING THE PAST WEEK.

H. RITCHIE, of Brixton, Surrey: For improvements in the manufacture of copper, brass, and other tubes, or pipes. These improvements consist principally in the employment of oscillating grooved rollers, for elongating or drawing out tubes or pipes formed of copper or brass. Both upper and lower rollers are made to revolve at the same surface speed, and the grooves formed in them are of a gradually increasing size from a certain point. At their smallest part, the grooves form an aperture of the diameter of the finished size of the intended pipe. The casting from which the pipe is to be drawn or rolled is produced, in the first instance, of a tapering form, and the taper end is introduced into the wider part of the grooves. The rollers are then put in motion, so as to produce part of a revolution in one direction; the motion is then reversed. The pipe under process of formation is at each successive half revolution advanced between the rollers, until the whole length has been reduced to the intended size. By means of these oscillating rollers, pipes increasing in thickness from the ends towards the middle, or having thickened parts upon them, may be formed.—*Claims:* 1. The mode of elongating cast copper, brass, and other metal tubes or pipes, by rolling surfaces, caused to alternate in their rotation. —2. The making tubes with seams, as above described.

W. BUCKWELL, of the Artificial Granite Works, Battersea, C.E., and G. FISHER, of the Taff Vale Railway, Cardiff, C.E.: For improvements in the construction and means of applying carriage and certain other springs. The carriage springs here patented are constructed in the form of ellipses, thickened at the ends (either by additional metal at these points, or by affixing two or more plates), and fixed so as to bear loads applied at right angles to their transverse diameter, or in direction of the tension of the metal. According to this system springs, one-tenth the weight of those constructed as at present in the form of a segmental pliable beam, will bear an equal load or loads in cwts. equal to the square of their weight in lbs. In actual practice, the patentees, however, prefer to allow one-half only of this weight. Thus, a load of 10 tons nett will be safely supported by four springs, each 10 lbs. weight, which would have required springs of 400 lbs. weight, when constructed by the ordinary method. The dimensions given for such springs are—conjugate diameter, 18 in.: transverse diameter, 11 in.; width of plate, 2 in.; thickness, 3-16ths of an inch. Double this thickness will be required if the load be applied at the side of the elliptical spring, which would then require to be thickened instead of the ends, as in the former case. Springs of this construction are also applied as traction and shunting springs; one central buffer only being used, and the springs connected by a draw-bar, slotted at each end, to allow of its coming home against the spring at either end.—*Claim:* The construction and application of springs, as described.

E. PROTHEROE, Austinfriars, London, merchant: For improvements in the manufacture of oxide of zinc, and in making paints from oxide of zinc. The improvements above referred to and claimed in the specification, are as follows:—1. and 2. An arrangement of apparatus, consisting of a reverberatory furnace, in which the zinc is melted, and two retorts, in communication with each other, into which the metal flows; so that a constant clean surface of melted zinc is kept submitted to the action of currents of atmospheric air, the heavier portions of the oxide thus produced being raked out of the retorts, and falling into a chamber underneath, thence to be removed either in a box on wheels into which they fall, or by means of shovelling; the lighter portions passing up a shaft, and being thence driven by a current of steam to the condensing chambers, in which the vapour passes through a series of frames on which the oxide is deposited, the air passing off through suitable chimneys. By tilting these frames, the oxide falls to the bottom of the chambers, and may be removed by any of the means ordinarily in use. These chambers are kept cool by means of water playing on their exteriors.—3. Bleaching the light oxide by means of water acidulated with sulphuric or acetic acid.—4. Grinding and compressing of the oxide of zinc, by means of a suitable mill. This mill consists of a conical roller revolving in a circular trough. This roller is placed on its side, with its narrowest diameter at the circumference of the trough. Underneath the trough is a chamber, into which the oxide falls after being ground.—5. The manufacture of oxide of zinc into paints, by combining the same with certain specified materials, in order to facilitate its drying. The patentee employs umber, which is first dissolved in muriatic acid over a fire, and then concentrated to the consistence of butter or honey. To this is added resin, and the substance thus formed the patentee calls resinate of umber. This resinate, when mixed with the oxide of zinc, forms a quickly-drying paint. Instead of the resinate of umber, umber in its native state may be used, but not so advantageously. Another preparation to be employed in combination with the oxide is composed of one part umber, treated as as above, two parts chalk or carbonate of lime, and four parts resin from the yellow pine. In addition to these, the patentee proposes another mixture, which he terms resinate of lead white; oxide of lead dissolved in acetic acid, being substituted for umber, and prepared in a similar manner.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

F. B. Geither, Birmingham, expanding dining table.
W. Poupard, Wych-street, Strand, curvilinear beam for weighing machines.
E. O. Tindall, and L. Tindall, Scarborough, York, Tindall's smoke elevator.
Key, Mitchell, and Friez, Newgate-street, convertable bedstead.
E. Greaves, Sheffield, brass founder, variable pendulum, or portable metronome.
Bryan, Donkin, and Co., Grange-road, Bermondsey, rotary rag boiler for paper-makers.
W. F. Robinson, Lieut. R.N., Junior United Service Club, self-acting safety plug, or stopper for boats and other vessels.
R. Watts, Manchester, metallic packing for pistons.
J. Harvey, Westminster Bridge-road, the Richmond car.
C. Maschwitz, jun., Birmingham, box or case for postage stamps.
Dusholt and J. Roaf, Finsbury-pavement, the bush tent.
T. Parker, Kensington, knife and fork cleaner.
C. Rowley, Newhall-street, Birmingham, the Prince's vest button.
J. Smith and H. W. Ditchett, of the firm of Smith and Co., St. Augustine's-parade, Bristol, blind roller.—*Mechanics' Magazine.*

THE IMPERIAL ALKALI AND SALT COMPANY.—His Honour, Master Tinney, has just made his report to the Court of Chancery on the affairs of this company, from which it appears that the association was started in 1836 for manufacturing and selling salt and soap, the produce of certain salt and alkali works at Stokewitch, near Worcester. The capital was 75,000*l.*, in 6000 shares, of 12*l.* 10s. each, with power to borrow 50,000*l.* more. The directors were Messrs. R. and J. Morrell, of Oxford, who were also the company's bankers; H. Morrell, of London; J. Ransford, of Oxford; J. Parker, of Bicester; and R. Garrett, of London. A deposit of 5*l.* per share was paid on the share capital, and operations were commenced under the managing direction of Mr. R. Parker: the company at first manufacturing and selling large quantities of salt, vitriol, and soda. Shortly after a call of 2*l.* per share was made and paid, and on a second call of 2*l.* being required a few months after, Parker, who was suddenly superseded in the management, cautioned the shareholders not to pay any more money until they had ascertained the liabilities. The Messrs. Morell then assumed the entire control of the undertaking, and conducted it, as is alleged, "in the most unauthorised manner." Robert Morell, since dead, it is asserted applied the funds without check or control, employed builders and surveyors, and caused buildings to be erected for the manufacture of soap which were unnecessary. Applications were constantly made to the Messrs. Morell for a statement of accounts, but none were rendered, though on one occasion Mr. R. Morell informed the shareholders that all the money subscribed, 27,500*l.*, had been expended; that the bankers (Messrs. Morell's) account was overdrawn by 20,000*l.*; that the other debts and liabilities amounted to 8000*l.*, and that the company's patent "for manufacturing soap out of flint" had proved an entire failure. At length, in 1840, the directors issued a statement of accounts showing the liabilities over assets at upwards of 24,000*l.* Since the first proceedings were taken under the Winding-up Act, it appears that the bankers' balances against the company gradually increased from December, 1843, to December, 1846, from 46,000*l.* to 79,000*l.* From the commencement of the company to the present moment no dividend was declared. The bankers' claim of 99,655*l.* is intended wholy to be disputed. It is stated by those who oppose the winding-up, and by the engineer, that the estates and property, if sold, are sufficient to meet this claim and all other liabilities, but that if subject to a forced sale, they will not realise one-fourth of their value. His Honour, the Master, reports that it is expedient to wind-up the concern, because there is no properly constituted board of directors for carrying on the works, and that to establish the rights of the shareholders it is expedient, for the benefit of all parties, that the estate should be confided to an official manager.

WINDING-UP OF THE DIRECT WESTERN RAILWAY.—Petitions have been presented by Messrs. Thompson, Appleby, and Longden, for the winding-up of this company, which was started as a rival line to the Great Western Railway and which caused considerable excitement during the period of the railway mania.

Mining Correspondence.

BRITISH MINES.

ALFRED CONSOLS.—We have just commenced driving north in the 80, east of Field's engine-shaft, and find, so far as is driven, the lode principally caples; in the course of the present week six of the shaftmen will commence about the plunger lift in the 70 fm. level. The lode in the winze sinking under the 70 fm. level, east of the engine-shaft, is 6 ft. wide, and is worth about 40*l.* per fathom—this winze is No. 1. We have this day commenced sinking a winze under the 70 fm. level, 14 fms. east of No. 1 winze—this is No. 2; the lode here for the first start is worth about 100*l.* per fathom. The lode in the 70 fathom level east is 7 ft. wide, nearly all solid copper ore, worth quite 150*l.* per fathom. The lode in the winze sinking under the 60 fm. level, west of Wyld shaft, is from 4 to 5 ft. wide, worth for copper ore 60*l.* per fathom; this winze is 10 fms. east of the 70 fm. level end, and has the appearance of soon reaching in value that of the 70 fm. level. No other change since last report.

BAT HOLES.—We have cleared out the deep adit on the Cornish lode, and find the present end to be driven into shale. There has been a great deal of work done on the lode by the ancients both in back and bottom of this level; there is also a communication opened from this lode to the new vein in this level, by driving on a branch that is split off from the new vein, leaving the other part to the west of this branch. In the shallow adit, on the new vein, the lode in the end is worth at present 9*l.* per fathom for lead ore, ground moderate for driving, price 4*l.* 10s. per fathom. We have suspended sinking the winze in consequence of finding a rise in the back of the deep adit level, which is put up 10 fms., being about 8 fms. to the south of the winze; therefore, we thought it more prudent to stope the ground south, and there form a communication with the back. We find the lode in this stope to be worth at this time 20*l.* per fathom, price 1*l.* 10s. per fm.; the stopes to the north of this are worth 7*l.* 10s. per fathom, price 1*l.* 5s. per fathom.

BEDFORD UNITED.—In the 115 fm. level, east of Andrew's winze, the lode is 3 ft. wide, producing fine stones of ore—a very promising lode; in this level west we are driving by the side of the lode. In the 103 fm. level east the lode is 4 ft. wide, and will yield 8 tons of ore per fm. The lode in the 90 fm. level east is 2 ft. wide, producing saving work: and in Arscott's winze, in this level, the lode is worth 5 tons of ore per fm. We are driving by the side of the lode in the 80 fm. level east. We weighed at Morwellham, on Friday last, 120 tons 7 cwts. 2 qrs. August ores, and sampled September ores, computed 120 tons (21 cwts.).

BLACK CRAIG AND CRAIGTON.—As many men are employed in clearing up the bottom level as can work to profit. We have put in a large quantity of timber to form a level through the large roomings formerly worked out for ore, in order to make a place for depositing the rubbish and securing the bottom of the mine, which is much crushed. We are stoping 3 ft. from the bottom of the south rooming, where we are raising a quantity of excellent ore. We are also driving a drift through a pillar of good orey ground to the west side of this, to meet the main level, which by this means will be shortened and made secure as the old level is crushed in. The old men have had such lead in the bottoms as we have never seen above adit; but they have worked more ground about the foot of Welsh shaft than we expected. As soon as we get an opening through the drift referred to, we can then set a number of men to work on ore. We have not yet got cleared up to the winze, or sump, where the best ore is standing. Six men have been put on tribute in Armstrong's sump (under adit), which is about 30 fms. east, and at the same random as the 7 fm. level out of Welsh shaft, where Crawford is a good mixture of ore. A tribute bargain has also been set in the 7 fm. level to the east of Crawford. We have 27 tons of ore dressed, and a quantity more ready to dress from the bottom of Welsh shaft, and more still to draw from the stoup and drift referred to. The trial t Clogston's shaft continues much the same.

BODMIN CONSOLS.—I have taken the opportunity of inspecting your property previous to the present meeting, so as to be able to present you with a report of its latest prospects. I am happy to inform you that the previous reports made on this mine, and printed in the prospectus and the *Mining Journal*, are being verified in each advance made in the excavations. The first position I visited, accompanied by Capts. Vercoe and Hooper, was the north, or Pye's, adit; this is driven under the hill in a northerly direction about 60 fms., and stopes to the extent of 5 or 6 fms. in length are executed in the bottom. This we have been enabled to do in consequence of the advance of the 13 fm. level below towards this ground, and the drainage effected thereby; this stope, though only 7 or 8 ft. in depth, shows a considerable improvement; the lode in it is 3 to 4 ft. wide, composed of decomposed quartz and gossan, and stained with the sulphate and arseniates of lead, and traversed by branches of galena—one branch of which averages about 1½ in. wide. The fair value of this adit may be calculated to turn out nearly half a ton of ore per fm. for an extent of about 50 fms., equal to about 6*l.* to 7*l.* per fm. The second position of the workings is the southern, or Hext's, adit; this level, is driven on the same lode, south of the engine-shaft, and is extended about 45 fathoms through a very promising lode for the last few fathoms; a winze is sunk near the end of the level to connect it with the 13 fm. level approaching towards this point; this winze is sunk 7 fms. through a large gossan lode, containing several branches of galena. Some part of the lode is capable of turning out a ton of ore per fm., equal to 15*l.* per ton. The third position of these workings is the engine-shaft. Before entering into the details of this part of the mine, it may be necessary to re-state that it is traversed by a layer of greenstone schists—a species of volcanic rock—very detrimental to the productiveness of a lode when in it; but often adding to the mineral deposits of the contiguous strata. Such has been the case in the celebrated Trelawny Lead Mine, which is generally allowed to bear very similar features to this mine. The engine-shaft is sunk through this layer, and in the 13 fm. level it is about emerging from it; but the lode being further south in that level, is still affected by it. The appearance of the lode in that level is large and quartzose, compact, and containing crystalline fissures, with much lead interspersed, as the levels are extended both northward and southward out of the influence of the greenstone layer; the north level is extended 6 fms., and the south level 10 fms. The first effects perceivable in their extension has been the drainage of the adits, though at a considerable distance from being directly under them. This augurs favourably for the existence of a large lode further in the ends, and certainly speaks strongly as to the advisability of extending these levels without loss of time, which can be done at a moderate cost of about 4*l.* per fm. at present, with the chance of a much less cost directly the neighbouring stratum is entered. The fourth and last position of importance which I beg to call the company's attention to, is the immediate sinking of the engine-shaft, which should be prosecuted with full vigour at this season of the year, now that we have more water for our wheel; so that, by next May, we may be in a position to declare positively that our mine is a permanent and valuable undertaking. The cost of sinking this shaft would not be more than 12*l.* per fathom, as the ground is much improved in the bottom, the greenstone layer having dipped from it. The effectual prosecution of this tutwork for the next six months, so as to bring this mine into that position of value which may very reasonably be expected from present appearances and discoveries, would involve a cost of 160*l.* per month. During this period, much lead ore may be returned, for the 13 fm. level may cut rich in both ends; and should the shoots of ore opened on in the adits above prove continuous only at this depth, several thousand pounds worth of ore would at once be in sight.

BRYN-ARIAN.—The lode in the 20 fm. level, west of the engine-shaft, is 5 ft. wide, with a mixture of ore throughout, although coarse in quality—we are saving the whole for dressing. The lode in the 10 fm. level west is 4 ft. wide, with but little ore at present—not any to set value on; the stope in the back of this level is much as last reported, yielding about 25 cwts. of ore per fm. The adit level driving west is become disordered and poor within the last three days; the stopes in the back over this level are yielding 15 cwts. of ore per fm. The plat in the 10 fm. level, in Hallett's shaft, is completed, and the men are now putting in a penthouse, and will commence sinking on Thursday. The quantity of ore we have at surface is about 12 tons, from 4 to 5 tons of which is clean. We have engaged a vessel to carry the last sale of ore to Llanelly.

CARTHEW CONSOLS.—The sumpmen have completed fixing bearers and cistern, with sinking lift in the 75, and have sunk the engine-shaft below it 2 or 3 fms., wherein the ground is good—they have not yet taken down any lode. We have a very good lode in the north end in the 75, it is about 2½ ft. wide—this is a very great improvement from last report; in the south end, in this level, the lode (though not as rich as in the last noticed end) looks very well, it is about 3ft. wide. The lode in the south end, in the 65 fathom level, has been somewhat disordered this week, but I doubt not, from present prospects, that ere another week closes, we shall arrive at a point where it will be found quite as productive as it has been heretofore. We have commenced operations in the adit level south, with the intention of clearing it to the southernmost point, to enable us to drive to intersect the east and west lode, which has not yet been seen more than 9 ft. below surface, to do which the adit level has to be driven about 17 fms. The tribute department is without material change, looking very well.

CRADDOCK MOOR.—Since I last reported we have extended the 20 fm. level north on the cross-course about 7 fms. We cut Dunstan's lode—the eastern heave about 2 fms. from shaft, and the western heave about 2 fms. 4 ft. This lode is about 3 ft. big, composed of peach, quartz, and good stones of yellow copper ore; but it will hardly pay for breaking, as the ground is hard. It is a very promising lode at this depth. We have not yet cut Vivian's lode, but are expecting to do so every day. I would recommend to cut this lode, and then sink the shaft with all speed, as Vivian's and Menadue lodes at the adit and 17 fm. and other levels are looking well in West Caradon, going west towards Craddock Moor.

DEVON AND COURTENAY CONSOLS.—The sumpmen are progressing well in driving the cross-course in the 60 fm. level, and I expect to cut the south lode in the course of a few days. During the last week we have taken down the lode in the 60 west, which produced some good ore. The lode in the winze has not been taken down since my last report. We are now sinking in the eastern hill (by the great elvan course, in search of the large mundic lode), in decomposed elvan, clay, and gossan. Since my last report we have opened on one of the central lodes, on the west side of the Tavy; it is from 2½ to 3 ft. wide, a large portion of which is in tolerable good dredge work.

EAST CROWNDALE.—The lode in the middle shaft is producing good stones of tin. In the 40 fathom level east the lode is large and well-defined, but not rich. The tribute department is much as usual.

EAST SHARP TOR.—The lode in Hitchins's shaft is still very hard, but maintains the same highly promising character as alluded to in former reports; there are no symptoms of the north wall being reached as yet. The water is a little increased since my last, and we are now engaged in erecting a small balance-bob, which I hope will be completed by this day week.

EAST TAMAR CONSOLS.—In the 70 fm. level, north of Furzehill shaft, an improvement has taken place in the lode; it is now 18 in. wide, composed of can, fluor-spar, and very good stones of ore, altogether presenting much more promising appearances than for some months past. In the north end, in the 60 fm. level, the lode is 3½ ft. wide, composed of can and ore, to the extent of 8 cwts. per fathom; this level has been extended 3 fms. 2 ft. 6 in. during the past month, and left very good tribute ground. In the 21 fm. level, south of Caroline's shaft, a considerable and favourable change has taken place in the lode; it is better defined, more upright and firmer, carrying a leader that will yield 6 cwts. of good ore per fathom, and there is no doubt but we are getting into a better run of ore ground. The 26 fathom level, north of Church-lane shaft, is driving towards the last-mentioned end on the course of a fine strong lode, 4 ft. wide, with but little underlay, and worth 13 cwts. of ore per fathom, and likely to improve. Gallett's engine-shaft is cut down to a proper size, and divided, 13 fms. 1 ft. under the 26 fm. level, below the deep adit; we propose to continue it until we reach the next level, which, from report, is 3 fms. deeper. Church-lane shaft has been cut down in some parts, and otherwise altered and repaired, and stands and pullies have been erected from Charlotte's shaft to it, so as to draw all the work from this part of the mine by the steam whim-engine at Furzehill; the distance is 235 fms., and it is satisfactory to be able to state that it works perfectly well, and does the duty of six horses daily, thus effecting a considerable saving, and greatly facilitating the underground operations. The tribute department is much increased, 16 pitches being set on Friday last to 52 men, at an average tribute of 10s. 9d. in the 1*l.* for lead, the highest being 11s., and the lowest 9s. 6d. All our machinery is now in good and effective condition, whereby economy is preserved, and freedom from accident, so far as possible, secured.

EAST WHEAL GEORGE.—The lode in the 12 fm. level, east of the engine-shaft, is about 4 feet wide, mixed with copper ore, spar, and peach, carrying two very regular walls, and from the appearance of the end I think it is not far distant from a bunch of ore; in the 12 fathom level west the lode is from 2½ ft. to 3 ft. wide, with ore throughout, with a leader of copper ore near the north wall, 7 or 8 in. wide, worth from 10*l.* to 12*l.* per fm.; the country about the lode is a beautiful light killas, wherein such a large lode like this seldom fails in making large quantities of ore. The lode stoping west in the bottom of the adit, and 3 fms. below, is 2½ feet wide, worth from 12*l.* to 15*l.* per fm. I understand from the agents that a rise would shortly be commenced from the level below, which will facilitate the working of the stopes above; I have no doubt of the mine at once paying its cost, with every chance of better discoveries. The engine-shaft is in course of sinking below the 12 fm. level to the 24, by nine men; when down, and the lode cut, I shall expect a course of ore; but should it not be the case, I would strongly recommend sinking to the 36 fathom level as fast as possible: should any more power be required, the water can be brought to a much greater height than the top of the present wheel. I was glad to see the dressing department getting on so well, and the carts so busily employed in carrying the ore for market; also the floors so well supplied, beside the coming ore for the next sampling. I beg to say, that I am much pleased with the present prospects, and I have no doubt of East Wheal George being a very productive mine.—WILLIAM VERRAN.

EAST WHEAL JOSIAH.—There is nothing new here to report on this week of any importance. In the adit end south the lode holds its size and character, composed principally of flookan, mundic, and spar, with spots of lead and copper ore.

GOGINAN.—No change of importance has occurred here. The lode in the 120 fm. level, west of Francis shaft, is 6 ft wide, yielding 2 tons of ore per fathom. The 117, 30 fms. west of Francis shaft, is 7 ft. wide, yielding 1½ ton per fm. The stopes over the 110 are yielding from 1 to 1½ ton per fm.: the stopes in the 26 and 50, on the south lode, are yielding 15 cwts. per fm.; the stopes at Levelnwydd yield 18 cwts. of ore per fm.

GONAMENA.—The 80 fm. cross-cut is driven north 15 fms.; we have 20 more to drive to cut Taylor's lode in that level. The 80 fm. level east, on Gilpin's lode is driven 13 fms.; the lode is 15 in. wide, composed of spar, mundic, and peach, with spots of ore. We have 4 fms. more to drive to get under the ore we had in the level above. The 60 fm. end, east on Gilpin's lode, is suspended for the time; we have sunk a winze in the bottom of this level 10 fms., the lode is producing 1 ton of ore per fm. The men are now rising in the back to meet a winze sinking from the 50, which will be finished in a week or two, and give us better air; we shall then resume sinking on the ore. The 38 fm. level, on Taylor's lode, is small and poor. In the back of the 17 fm. level, on Taylor's, we have two pitches, working at 12s. in 1*l.* We expect to have 20 to 30 tons of ore for sale against next meeting.

HOLMBUSH.—We have completed all the work in Hitchins's engine-shaft in the 120 fm. level, preparatory to sinking, such as removing two small lifts and fixing a large one instead, cutting a plat for cistern, bearer holes, &c., and fixing the same, removing penthouse, and putting in a new one, taking up all the water, so as to enable us to commence sinking to-day, and we hope to sink several fathoms below this level without the aid of a lift. On setting day we intend to put 12 men to sink it, as it is a large shaft (12 feet by 8 feet), and at present a hard one—price 40*l.* per fathom. You may depend on me pushing it on as fast as possible to communicate to the 132 fm. level, well knowing the advantages that will accrue after its accomplishment. The lode in the 132 fm. level, west of the great cross-course, is 2 ft. wide, and it will produce full 3 tons of copper ore per fathom of good quality; the lode in the stopes in the back of this level, east of the point of horse, is split in two parts going up, as might naturally be expected, from what is seen above the level; the two parts of the lode will produce about 3 tons of copper ore per fathom, but it is not so valuable as if the lode was compact, because it will cost more money to stope it. The ground in the 132 fathom level cross-cut south, driving towards Hitchins's engine-shaft, is much the same as when last reported; the ground in the north cross-cut, in this level, is favourable. The flap-jack lode, in the 120 fm. level, east of the great cross-course, is 15 in. wide, composed of mundic, spar, and stones of copper ore. The ground in the rise above this level, to communicated to the 100, is favourable, but the lode is small and poor; it should be remembered it is close to the great cross-course, where we do not expect to find a productive lode. The lode in the 120 fathom level south is 7 ft. wide, composed principally of soft quartz and blende, with spots of lead; the north end, in this level, is for the present suspended, in consequence of being filled with stuff, which accumulated during the time of dropping the lift, &c. The flap-jack lode, in the 100 fm. level, east of the great cross-course, is 2½ ft. wide, composed of mundic and stones of copper ore; the pitch in the back of the level is not so productive as it was, but still producing some very good copper ore. Our copper ore is weighed.

KESWICK.—The 10 fm. level rise, at Brandley, is looking better, as is also the stope in this place. The tribute pitch is rather poor at present. At Old Brandley the vein in the new level continues very promising, with spots of ore, but still broken up. At Thornthwaite, the 17 fm. forehead is not looking so well; the No. 1 stope is a little poorer; No. 3 stope looking very well. We are close upon the junction of the string and vein in the bottom level, and about 2 or 3 fms. from the run of ore which we sunk upon in the 17 fm. level, on vein. That part of the vein we have seen is looking very well for ore; the bottom level stope is yielding good ore.

KIRKCUDBRIGHTSHIRE.—The lode in Stewart's shaft is 3 ft. wide, with spots of ore. The lode in the 62 end is 3 ft. wide, with a good branch of ore coming in on the north side. The lode in engine-shaft is 5 ft. wide, yielding 15 cwts. of lead to a fm.

LLWYNMALEES.—The 14 fm. level improves daily, and will shortly be in the shoot of ore from the western winze. The plat at the bottom of London shaft will be completed next week, and we shall then proceed to drive the 24 fm. level east and west from it. The 8 fathom level west continues poor; the stopes over this level, from 11 to 17 fms. west of western winze, are not so productive; but the stopes over the 8 fm. level, from 5 to 11 fms. west of western winze, are more productive.

OLD POLBERRO.—An improvement is reported in the copper lode, where, in the 27 fm. level, the lode has, in 6 ft. driving, increased in width from 18 in. to 30 in. and the end will now produce from 3 to 4 tons of ore per fm. The 40 fm. level is being driven to come under this ore ground. The pitches on the tin ground are also looking better, so that the prospects of the concern are more cheering. It is at present working at a loss of about 200*l.* per month.

PETER TAVY AND MARY TAVY CONSOLS.—The sumpmen are getting on very well in stoping down the engine-shaft below the 32 fm. level; the lode is occasionally producing very pretty stones of good quality ore. The whole of the machinery is working well.

SNOWDON.—With the conclusion of the month, I send you the cost sheet for the last four weeks, and have to advise that the copper ore lately raised on tribute has been dressed equal to 8 per cent. in produce, and forwarded to Carnarvon for shipment, being upwards of 30 tons. The only tutwork now on hand is the driving of the level to drain the Green Lake, and I await instructions as to the terms of the setting to the tributers for the next month.

SOUTH TAMAR CONSOLS.—I beg to hand you the following report of the operations of the past month, and on the present state of the mine:—At the engine-shaft the bottom lift has been changed and fixed in the 112 fm. level, and the shaft sunk 1 fm. 2 ft.; it is now 4 fms. 2 ft. under the 112; the lode in it is 3½ ft. wide, carrying good branches of lead that will yield 12 cwts. per fm.; the ground is congenial for ore, and moderately easy for sinking. The 112 fathom level has been extended north 4 fms. 1 ft.; the lode in the end is 3½ ft. wide, with a very slight underlay, and composed of fluor-spar and prian, intermixed with fine-grained lead to the extent of 5 cwts. per fm, and is in an improving state; the same level south has been driven 5 fms. 2 ft. 6 in.; the lode in this end is 4 ft. wide, composed of fluor and horn-spar, and on an average has produced 6 cwts. of ore per fm. The 100 fm. level north has been extended 8 fms. 4 ft. 6 in.; the lode in the end is 4 ft. wide, worth 12 cwts. of good ore per fm., and from present appearances it will in all probability improve; the same level south has been driven 7 fms. 3 ft.; the lode in the end is 3 ft. wide, 1 ft. of it yielding good work; it continues to be easy for driving, and to open profitable tribute ground. The 90 fm. level, north of Glynn's shaft, has been extended 6 fms. 5 ft. by the side of the lode; the men are now set to cross-cut through the lode; the south end, in this level, has been driven 5 fms.; the lode is still disordered and unproductive, but presents indications to warrant an expectation of its improving. The 80 fm. level south has been driven 3 fms. 5 ft. 6 in.; the lode in the end is 6 ft. wide, with well-defined walls, carrying a flookan on each, and on the eastern side some good stones of rich ore; the centre of the lode is composed of capel, spar, and can, and there is every appearance of its making a great and important change in the course of the current month. The following pitches were set on Saturday last:—In the back of the 112 north, to six men, at 7s. 6d. (for lead); ditto south, to six men, at 5s. 6d., and to four men, at 7s. 6d. In the 103 north, to four men, at 10s., and to two men, at 10s.; ditto south, to six men, at 5s. In the 90 south, to two men, at 11s. In the 70 south, to two men, at 12s. Seven other pitches, at an average tribute of 9s., were put up, but not offered for—the new bargains and pitches requiring 28 men, and there not being a sufficient number in attendance. The new engine-house is roofed, and the masons are now erecting the stack. I expect the heavy part of the engine will be on the mine this week. It is highly desirable to get the machinery completed, as it will enable us to return the large accumulation of stamps' work, which is rich for silver, and thereby increase our samplings, and improve the quality of the ores.

SOUTH TOLGUS.—The mine continues favourable. There are four levels driving west on the north lode. The 54 is 3 ft. wide, with stones of ore. The 32 is 20 in. wide, yielding 1 ton of ore per fm. The 22 is 10 in. wide, poor. The 12 is 2 feet wide, yielding 1½ ton per fm. There are six levels driving east on the south lode, all very promising for ore. The south lode, in the 42 west, is 18 in. wide, yielding 1 ton of ore per fm.

TRELAWNY.—At Phillip's shaft, in the 62 end north, the lode is 15 inches wide, worth 6*l.* per fm. Part of the shaftmen have resumed sinking Trelawny shaft, and the others are employed with the pitman, preparing to fix the lift in the 92. In the 92 north the lode is 3½ ft. wide, worth 10*l.* per fm.; in the same level south the lode is 3 ft. wide, worth 10*l.* per fm. In the 82 north the lode is 3 ft. wide, worth 9*l.* per fm.; in the winze in the bottom of this level the lode is 3½ ft. wide, worth 8*l.* per fm. In the 72 fm. level north the lode is 18 in. wide, worth 16*l.* per fm. At the north mine, the shaftmen are still engaged cutting plat in the 55 fm. level, and as soon as it is finished we shall commence driving north, where the lode is 2 ft. wide, worth 8*l.* per fm.; in the south end, at this level, the lode is 2 ft. wide, worth 5*l.* per fm. We have resumed driving the 40, north of Smith's shaft, where the lode is poor. Our stopes are much as heretofore.

TRELEIGH CONSOLS.—The following is an account of our setting:—Christoe Lode: The 100 fm. level, west of Garden's shaft, explored 1 fm. 5 ft., price 6*l.*; we are driving north to prove the lode. The 90, west of ditto, 3 fms. 2 ft., price 7*l.*, lode 3 ft. wide, worth 24*l.* per fm.; winze below the 90, west of ditto, 1 fm. 4 ft. 4 in., price 15*l.*, lode 15 in. wide, not much ore; stopes above the 90, west of Harrie's winze, 6 fms. 4 ft. 10 in., price 2*l.* 15s., lode 3 ft. wide, worth 22*l.* per fm. The 80, west of Garden's, on the north part, 2 fms 4 ft., price 4*l.* 10s., lode 20 in. wide, with stones of ore. The 70, west of Garden's shaft, 3 fms., price 5*l.*, lode 2 ft. wide, worth 6*l.* per fm.—Parent Lode: The 52 fm. level, east of present engine-shaft, 4 fms. 4 ft., price 3*l.*; cross-cut, north of ditto, 2 fms. 5 ft. 6 in., suspended, and the said level set to drive west on the lode, at 3*l.* per fm. The 40, east of Parent engine-shaft, 5 fms. 2 ft. 6 in., price 3*l.*; driving on the cross-course to cut the lode, it being removed by the said cross-course. The 30 fathom level, east of ditto, price 2*l.*, set new in the above cross-course.—Middle Lode: The 40 fathom level, east of cross-cut, south of Parent engine-shaft, 5 fathoms 3 feet 6 inches, price 2*l.*, lode 20 in. wide, worth 3*l.* per fm.; the same level, west of ditto, 6 fm. 4 ft 6 in., price 1*l.* 15s., lode 18 in. wide, worth 3*l.* per fm. Burgess' shaft, from surface, 4 fms.; sinking in the country for the middle lode. The following is our tribute setting:—Christoe Lode: Back of the 90 fm. level, west of cross-cut, on the north part, at 9s. Back of the 90, east of ditto, at 11s.; back of the 80, east of Garden's, 10s.; back of the 80, east of the above, at 10s. Back of the 70, east of Stevens' winze, at 8s.; ditto, west of ditto, at 6s.—Parent Lode: Back of the 40, west of Phillips's winze, at 10s.; ditto, east of ditto, 10s.; ditto, east of Allen's winze, at 9s.; ditto, west of ditto, at 10s.

TYWARNHAYLE.—The 90 fm. level east continues good, producing 9 tons of ore per fathom. Bennett's shaft is also sinking in very productive ground. The 80 east is at present disordered by a cross course. The stopes are not looking quite so well. The new shaft on the lead lode at Wheal Clarence is sinking on a lode 2 ft. wide, looking very promising.

WELLINGTON.—The lode in the 50 fm. level, east and west of engine-shaft, is without change since my last report. The lode in the 42 fm. level, west of said shaft, is 9 in. wide, principally spar; the lode in the 42 fm. level, east of Parcelly shaft, is at present split in three parts, each part containing a small quantity of copper ore, and has the appearance of joining each other soon, at which point I expect an improvement. The lode in the western adit level is 9 in. wide, and has a very promising appearance, producing some copper ore. The driving of this level has for the last two months been poor; but I am glad to say there is an improving appearance just now. The lode in the adit level, east of the western whim shaft, is 14 in. wide, worth for copper ore 5*l.* per fm. The lode in the 10 fm. level, east of said shaft, is 12 in. wide, worth for copper ore 4*l.* per fm.; the 10 fm. level, west of said shaft, has been suspended for the month. The men are rising over this level for ventilation. The lode in the rise has for the most part been 18 in. wide, worth for copper ore 10*l.* per fm. We cannot sink the western whim shaft deeper on account of water; the lode in the shaft is 2½ ft. wide, worth for copper ore 20*l.* per fm. I hope in about one month from this time the ground will be drained by virtue of the 42 fm. level, west of the engine-shaft. The north lode in the 7 fm. level, west of the whim-shaft, is 2 ft. wide, worth for tin 4*l.* per fm.; we are not driving this level east at present; the men have commenced to sink the winze under this level, lode here 2 ft. wide, worth for tin 3*l.* to 5*l.* per fm. The ground in the cross-cut, driving north of the engine-shaft, in the adit level, is at present good for driving.

WEST GOGINAN.—I do not see any particular alteration in the shaft sinking under the 15 fm. level; the lode is about 5 ft. wide, composed principally of gossan, mixed with killas, mundic, and spots of lead ore; though not rich, it has a very promising appearance for that depth. We have had information of discovery being made on a lode about a quarter of a mile further west than where we are working, where they tell us that good specimens of lead ore have been raised. I have put three men to work in search of it for the last four days, but up to this time we have found nothing worth mentioning; still we shall pursue this object for a few days longer, as I know there is a lode running near the spot, and should we discover anything of value, you shall soon be in possession of all particulars.

WEST WHEAL JEWEL.—The 70 fathom level, west of Williams's cross-course, on Wheal Jewel lode, is worth 6*l.* per fm. We have not taken down the lode in Carkeek's winze in the 70 fm. level in the past week. The 57 fm. level, west of Hodges's cross-course, on Tolcarne tin lode, is worth 30*l.* per fm.; ditto, west of ditto cross-course, lode not taken down in the past week—when last reported, worth 15*l.* per fm. The winze west of Quarry shaft, in the 30 fm. level, on the same lode, is worth 4*l.* per fm. The shallow adit level, west of Tregoning's shaft, on the same lode, lode not taken down in the past week—when last reported, worth 10*l.* per fm. The stopes in the back of the 12 fm. level, west of Pryor's winze, on the same lode, are worth 14*l.* per fm.; ditto, bottom of the same level, east of Tregoning's shaft, on the same lode, are worth 27*l.* per fm.; ditto, bottom of same level, west of Tregoning's winze, are worth 26*l.* per fm. These stopes are working on tribute.

WEST WHEAL TOWAN.—The report is favourable. Taylor's engine-shaft has been cleared to the bottom, 20 fms. under adit, and preparations are making to drive on the Middleworks lode, and to cross-cut to Wheal Towan. Caroline's shaft is sinking in a fine killas between the north and south lodes, with several branches of rich tin passing from one lode to the other. The lode in the adit, east of cavern, is 4 ft. wide, with good stones of ore. The end west of Wheal Tye, on Taylor's lode, is very promising, with good stones of ore. The south lode at Vivian's shaft is also mentioned favourably.

WHEAL ARTHUR (CALSTOCK).—There is a shaft called the Old Hundred which we must begin to clear immediately, and erect a small horse-whim, when we shall be able to clear the mine to the west of the old workings, without any more machinery. The Old Hundred shaft is the one through which most of the ore has been drawn; when this is clear, I hope we shall be able to set some pitches on tribute, both on the copper and tin lodes, and this work will take but a very short time to complete. After clearing the level to the engine-shaft we shall drive north and south on the lead lode, as well as west on the copper lodes, so that we shall have several chances to raise ore, independent of the tribute ground.

WHEAL CREBOR.—Our setting on Saturday last was as follows:—The adit end, west of Rundle shaft, by two men and two boys, at 5*l.* per fm., stented 3 fms.—lode improving. The cross-cut in the adit to stope towards Rundle shaft, by three men and one boy, at 13s. per fathom. The 40 end, west of Rundle shaft, by four men and two boys, at 4*l.* 15s. per fathom, stented for the month, and lode looking well. A rise in the back of the 40, at Rundle shaft, by four men, at 2*l.* 10s. per fathom, and 5s. in the 1*l.*, lode kindly. The cross-cut in the 20, at Gill shaft, by one man and one boy, at 3*l.* 3s. per fm., stented 2 fms., or cut the lode. The 24, at Cock shaft, by two men; it appears the main part of the lode is to the north, which, when I have ascertained, I will advise you. I have put a pare of men to secure and clear the adit west of Kelly towards Rundle shaft; four men to clear up the shaft sunk by Mr. Hitchins in Beauford's line; it appears by the gossan from this lode, the lode is large and promising—the like appearance is shown where it is cut in our costeaning. The men have met with several parallel lodes, which will be shown in the plans we are preparing, which you shall have a copy of. I intend to put the men to costean some distance north of Rundle shaft to-morrow, to ascertain what parallel lodes are within a convenient distance for opening at a depth by a cross-cut. The pare is dressing ore for another sampling, what quantity it will be I am not at present in a position to state. The engine, pitwork, &c., are in good working order; the stamps are at work, and will be for some time, as I have let the halvans at 14s. in 1*l.*, for two months.

WHEAL GENNYS.—We have intersected the lode in the 22 fm. level, and driven on its course south 10 fms., and north 12 fms. The lode throughout is large, varying in width from 2 to 6 or 7 feet, and producing south of the cross-cut nearly a ton of lead per fm.; north of the cross-cut, for several fms., about ½ ton of ore per fm., and for the last few fms. a quantity of gossan, thickly impregnated with white or carbonate of lead. The underlie of the lode is on an average about 1 ft. per fm.; it is in a beautiful soft killas, and very congenial for lead. We have commenced sinking the shaft, and expect to see the lode in the 32 fm. level by the end of January next. We have already several tons of lead at surface, and shall commence our dressing-floors at once to prepare it for market. From what we have already discovered, it is our decided opinion that we shall have a good and profitable mine.—[The particulars of the accounts were given in last week's Journal.]

WHEAL HARRIS.—In the cross-cut south, in the 25 fm. level, we have discovered a large lode, from 5 to 6 ft. wide, in an east and western direction, underlying north 6 ft. in a fm., composed principally of flookan and spar; south of which the ground is a little harder for driving, and also pretty much water issuing out, and it appears to be still increasing. We have discovered the north and south lode, but cannot give you the correct size and underlay of it, as it appears to be in a disordered state, or split up in branches, on which we intend sinking a few feet also to prove it. We have not yet reached the lode we are driving to cut, and from which the stones of antimony and lead were broken at a few feet below the surface.

WHEAL PENHALE.—Since my last report no lode has been taken down in the north end, in the 40 fm. level; but, in the south end, in this level, since meeting with the great improvement in the ground, we have found the lode also equally improved; it is about 3 ft. wide, composed of a soft white spar, and a little mundic, besides yielding a much greater quantity of lead and copper than it has heretofore, which leads me to suppose we are in near approach of good ore ground in this level. I have put the men from the north end, in the 30 fm. level, to stope the back of the same, to do which they are to have 30*l.* per fathom, with 1*l.* 5s. per ton for lead, and 2s. 6d. out of 1*l.* for copper—from this point I anticipate we shall be getting a considerable amount of ore. The lode in the south end, in the 10 fm. level, continues to show well; it is about 1½ ft. wide, with a branch of lead and copper on the east side of it about 3 in. wide. Operations have also since my last been commenced at the south shaft for the purpose of communicating it with the adit level, to do which we have to sink about 2 fms., and likewise to extend the adit end from 2 to 3 fms. south; this being done, we shall be in a very good position to do a great deal of work under easy circumstances in this part of the mine. The tribute generally is without much change, with the exception of Langdon's pitch in the back of the 30 fm. level, which is much improved.

WHEAL VINCENT.—The lode in the east end is about 9 in. wide, producing stones of copper ore and mundic, but not rich for tin; we are stoping the back of this end, and raising some tin. The lode in the end is small at present, and very regular, with easy ground by the side of it. We shall go to market with the tin on the 1st of November—it is about 1 ton 5 cwts.

FOREIGN MINES.

LINARES MINES.—The following has been received from Mr. H. Thomas:

Linares, Oct. 19.—I have availed myself of the opportunity afforded by the further drainage of La Manca winze, under the 45, to see the lode therein, at about 4 fms. under the level, and about this winze. I am glad to report to you, that there is a large piece of lode standing west, for about 5 fms. long, of excellent quality; for this distance there is a level driven west, but as there was about 5 ft. of water in it, it was not in our power to examine it minutely. Our pitman and another man have, however, succeeded in reaching the ends, and report a good course of lead therein, of a foot big. At the spot we were able to examine it, it was 18 in. wide, and worth 6 tons to a fathom. The lode in the bottom of the 45 being very good over this level, we may safely calculate on having made a considerable addition to our reserve of available ore. The water has prevented further—or indeed any—examination eastward of La Manca. The workings are considerable, and consequently the progress of forking is slow: I trust that it will be in my power, in another week, to let you know definitely when we may be able to give you a full report on the mine under the 45, as we may expect by that time to have seen the level between La Manca and San Pablo, and ascertained what arrangement is necessary to get the water out of the sink in the said level. The men have also been employed in clearing the level and putting in launders for conveying the water from Las Nieves further east, where I hope, by Monday, we shall also be draining the water by barrels. From the want of powder, the men who were sinking San Antonio winze have been prevented working therein during the past week, and we have employed them to put in the penthouse, &c., at the 45, in Wilson's shaft. Shaw's shaft is not yet communicated to the 45, but this may be daily expected. It is down under the 31 fm. level 22 varas 10 inches. San Juan continues without change, and is now under the 31 fm. level 18 varas 1 ft. 9 in. The lode in the 31 fm. level, driving east of Shaw's shaft, is rather harder, and not quite so good as last reported; it otherwise continues of the same promising character. In the 45, driving east, there is nothing new to notice. The tribute pitches continue productive, but as we are obliged to keep a pair of Englishmen at La Manca winze, we shall not this month raise so much ore as last, from the delay in resuming Wilson's shaft. As, however, the examination of such part of the workings under the 45 as we can reach confirm the reports given us of the productiveness of the lode, and the general prospects of the mine are so much improved.

Stock Account.	*Tons*	*cwts.*
Oct. 12—Ore in stock at Linares	124	2
„ 19—Weighed in this week	11	17
Making together	135	19
Sent for shipment	14	16
Remaining at Linares	121	3
Ditto Seville	60	3
Ditto Malaga	101	0
Total in Spain	282	6
On board ship	121	5
Total ore in stock ..... *Tons*	403	11 *cwts.*

ROYAL SANTIAGO MINING COMPANY:—

Cobre, Sept. 16.—*Perseverancia.*—We have made an effort to develope Thompson's shaft to the 20 fm. level, in order to fix the sinking lift, but without success; we find it impossible to keep the water and stuff with the mule whim. The lode is from 7 to 8 ft. wide, 3 ft. of which is saving work, yielding 5 tons of ore per fm.; the remainder is composed of arsenical pyrites and peach, interspersed with particles of yellow copper. As soon as

mule force can be obtained that is accustomed to draw a mule engine, we shall fix the plunger and drawing lifts without delay. The lode in the stopes, east from shaft, between the 10 and 8 fm. levels below, is much the same as above reported, yielding about the same quantity of ore per fm.; west from shaft, in the same level, the lode is of the same size as beforementioned, but contains more arsenical and coated yellow pyrites, yielding 6 tons of ore per fm. East from shaft, in the 10 fm. level, the lode is composed of green carbonate, red oxide, and black and grey ore; it is from 6 to 7 ft. wide, yielding 6 tons of ore per fm. The lode in the stopes west from shaft and winze No. 2, between the adit and 10 fm. levels, is without alteration. The stratum in the cross-cut south, in the adit level, is disordered, and has not so kindly an appearance as hitherto. The water continues to discharge itself freely from the middle part of the level, as usual. Goldsmid's shaft is developed 4 fms. below the surface; the stratum is as last reported.

San Joaquin.—Taylor's shaft is without alteration; its depth below the shallow adit is 5½ fms., and there remains to develope to the deep adit about 7 fms. The lode in the deep adit, driving west from winze, is from 4 to 5 ft. wide, 2 ft. of which yields black and grey ore, of a superior quality, at the rate of from 2 to 3 tons of ore per fm. It is perfectly free from the slide, but so little has been operated on it, that it would be premature to state more for the present.

San David.—The lode in the adit, driving west, is from 8 to 9 ft. wide, being composed of gossan, green carbonate, and iron pyrites, but not worth saving. This level is extended 3 fms. west from Goldsmid's shaft, and will be reported in future under the head of "Perseverancia."

Fortitude.—The intended engine and whim-shaft is cut down to the depth of 2 fms. from surface; the stratum is favourable; it is let to some native miners, at £10 a yard, for 12 fms. in depth.

Recurso.—The lode in the stopes east from Goldsmid's shaft, in the back and bottom of the 14 fm. level, is from 3 to 4 ft. wide, yielding 5 tons of ore per fm. During the past week we let a winze, to develope between the 26 and 33 fm. levels, or cross-cut adit. The lode is from 3 to 4 ft. wide, composed of tile and superior yellow copper ore, yielding 4 tons of ore per fm.; the matrix and strata are compact, and do not require to be fortified. The lode in the winze developing below Castro's adit, or 33 fms. from surface, is without alteration since last reported. West from cross-cut, in Castro's adit, the lode is also without alteration.

EAST WHEAL LEISURE IMNING COMPANY.

At a meeting of adventurers, held at the mine on the 23d inst., a report was presented, by which it appeared that the operations of the present adventurers were commenced at the end of June last, since which date the old adit levels, which are very extensive, have been cleared and secured, and a steam-engine of 33-inch cylinder erected, and set to work on the morning of the meeting. The whole expense of these works, up to this time (including the purchase of the engine and other machinery), amounts to less than 1000*l.* The monthly cost of working will be very moderate, to provide for which a call of 1*l.* per share is to be made immediately, and a further call of 1*l.* when required. The object of the adventurers is to try, on the eastern side of a great cross-course, the lodes formerly worked in the Old Wheal Leisure and Great St. George Mines. The indications seen in the adit level are very encouraging.

HEINGSTON DOWN CONSOLS MINING COMPANY.

The two-monthly meeting of adventurers was held at the offices on Wednesday, when the accounts were presented, showing—Balance from last account, 54*l.* 5s. 10d.; received for calls, 720*l.* 2s. 6d.; loan, 100*l.*; ores sold, 603*l.* 15s. 7d.; =1478*l.* 3s. 11d.—Mine cost for July, August, and September (including repayment of loan, 100*l.*), dues to the duchy of Cornwall, &c., 1045*l.* 13s. 2d.—leaving balance in hand, 432*l.* 10s. 9d. The statement of assets and liabilities showed a balance of receipts over payments, before next meeting, of 37*l.* 8s. 3d.

The following report, from the agent, was read to the meeting:—

Oct. 29.—The 45 fm. level is now extended about 19 fms. east of Victor's winze, of 9 fms. 1 ft. 2 in. since the last meeting, the lode in which, since then, for the greater part of the drivage, has been on an average 3 ft. wide, and occasionally passing through smal bunches of good quality ore; in the present end, however, although the lode maintains its size, and in every way is equally encouraging in its character, yet it does not for the time contain much ore; but, from the superior gossan for about 9 in. in width on the north part of and adjoining the caples, both of which are impregnated with yellow ore and the blue carbonate of copper, with the other part of the lode to the south also carrying a little ore, I confidently expect in our progress eastward that an improvement will take place shortly, more especially as such proved to be the case in the level above (the 35), under similar circumstances. Doidge's winze is now communicated with the 45 fathom level, in the sinking of which we have carried with us a kindly lode, producing good saving work nearly all the way. Saturday last being our survey day, I set this winze to sink below the 45, but deemed it advisable to commence it 3 fms. to the west of the former, at which point we passed through a very good bunch of ore, the holding down of which I am anxious to test, having gone through it in the 35 fm. level above, and are now rising on it in the back of the said level. The lode in the 35 fm. level, which at the time of your last meeting was disordered and rendered poor by a small branch of spar intersecting it, has now, I am happy to say, resumed its former promising appearance. We have driven eastward on it since then 5 fms. 4 ft., and for the last 6 ft. we have had a branch of ore, varying in size from 8 to 10 in. on the north part of it, succeeding the gossan that existed there, a circumstance which has been already alluded to as inducing the hope of a similar improvement in the 45 fm. level. We have risen in the back of the 35 fathom level for about 5 fms. in a good lode, which has turned out and still continues to yield about 3 tons of ore per fm., with every appearance of its holding. In the cross-cut towards the south lode, there is no change of importance, the present end thereof being about 20 fms. in from the level, the ground is hard, but of a highly mineralised character; I am, however, unable at present to speak of the distance yet to drive to intersect the south lode for the reasons given in the report read at your last meeting. The cross-cut north from the 20 fm. level has been extended in all 6 fms. 4 ft. 6 in. without any material alteration. We are pushing this end on with a force of four men, for effecting the much to be desired object of ventilation, by communication with the rise. The easterngper Hitchins's shaft, sinking on the south lode, is now down below the 20 fm. level 13 fms., and it is hoped will be made complete to the 35 fm. level by the end of November. For the last 2 fms. sinking, the lode produced some good stones of grey and yellow copper ore, and is altogether so kindly in its appearance and character, that I anticipate good results when it shall have been further proved by driving on at the next, or 35 fm. level. We sampled on Friday 25 tons of good ore, and samples of about 1¼ ton of tin have to-day been sent to the different buyers. I cannot conclude this report without alluding to the serious difficulty we have had to contend with from foul air, which in every part of the mine interferes with and impedes our progress. The means we are adopting to overcome this obstacle, when accomplished, will tend to reduce the consumption of coal, as also the price of the ground to be laid open.

MINERAL COURT MINING COMPANY.

A meeting was held at the mine, St. Stephen's, on Tuesday, the 23d October when the purser produced the accounts of the mine for the last three months, which were audited, and a call of 4*l.* per share made, to meet the loss incurred, which was, in a great measure, caused by the erection of machinery, and the necessary apparatus for dressing the tin. The prospects of the mine, particularly in the bottom level, appeared to be very good. Satisfactory reports, from Captain Evans, the experienced manager of Budnick, Friendly, and other tin mines, who had the same day inspected the mine, and of Capt. Dale, agent of the mine were read, and, with the entire approval of the adventurers present, were ordered to be carried into effect.

SOUTH WHEAL TRELAWNY MINING COMPANY.

At a general meeting of shareholders, held at the offices, Birchin-lane, on the 24th Oct., CHARLES CHIPPINDALE, Esq., in the chair,

After the usual preliminaries, the accounts were submitted, showing—Balance against mine on 27th June, 151*l.* 7s. 1d.; to June cost, 136*l.* 1s. 1d.; July ditto, 82*l.* 16s. 4d.; August ditto, 77*l.* 17s. 10d.; September ditto, 73*l.* 8s. 1d. =521*l.* 10s. 5d.—By call of 40s. per share, made 27th June last, 400*l.*: leaving balance against mine, 121*l.* 10s. 5d. This balance of 121*l.* 10s. 5d. is in addition to 143*l.* 16s. 6d., payable, but not yet due, to sundry parties for their proportion of materials, &c., in respect of 56 shares resigned. Unless the calls in arrear be paid within three weeks, the shareholders owing the same are to be legally proceeded against.

It was resolved that the lode be proved at the 60 fm. level by continuing the cross-cut to the lode, that the shaft be sunk 20 fms., as recommended by Capt. Seccombe, and that the operations be confined to the above, also that a contract be made for sinking the shaft the first 10 fms. immediately. Looking at the present circumstances of the company, and for saving of expense, it was deemed expedient that the services of Capt. Lean and Capt. Jenkins be dispensed with after the end of November, and that the management of the mine be placed under such person and regulations as Messrs. Charles Chippendale, George Mackay, William Chippendale, and Thomas Hackett, may deem proper. A call of 50s. per share was made.

The following report, from Capt. William Lean, was read:—

Oct. 23.—The lode in the 50 fm. level, north of the cross-cut, is 1 ft. wide, composed of spar, mundic, flookan, and sprigs of lead; this end is clear of the slide, and to the north of it: but the lode in the 60 fm. level is under, and in the midst of it; consequently, the lode is in a disordered state, and no doubt it will be, until it is clear from it, when we may reasonably expect it will present a much more favourable appearance than it has hitherto done. The ground in the 60 fm. level cross-cut, east of the engine-shaft, is a beautiful dark blue killas (or clay slate) stratum, a facsimile of the strata in Mary Ann Mine, which mine I carefully surveyed on Monday last, by the kind permission of Capt. Peter Clymo, who afforded me every facility for so doing; and at no time have I seen the mine so prosperous, especially in the 40, 50, and 60 fm. levels, south of the engine-shaft, which are to within (on an average) 250 fms. of our north boundary, and the direction of the lode is 26° west of south, which, if it continues, will bring the lode about 5 fms. east of our engine-shaft. Some doubts have been entertained whether we have a continuation of one and the same lode as Mary Ann, or not, but I am perfectly satisfied we have; but one thing is evident, we must go deeper to meet with a productive lode, as the lead is dipping southerly. The lode to the north of us has been laid open 700 fms. in length; and had the mines been consolidated, it would be a second East Wheal Rose; and if it falls entirely in South Trelawny, it will be a wonder in mining. The ground in the shaft could be sunk for 10*l.* per fm. The engine is in perfect order, and the water moderate.

The subjoined report, from Capt. Seccombe, who had been specially requested to inspect the mine, was also read:—

Oct. 22.—I find the adit level has been driven south from the valley (or north boundary of the sett) about 110 fathoms, on a lode composed of barytes, gossan, and killas, varying from 6 in. to 3½ ft. wide, the average bearing of which is about 27° west of south: and, from all I can see of the character and bearing of this lode, I believe it to be the same as is now being worked on in Wheal Mary Ann Mine, adjoining. In the 30 fm. level, below the adit, a cross-cut has been driven west, and intersected a lode, which I believe to be the same as the adit was driven on; it is similar in character, and contains spots of lead ore; the extent driven on the lode from north to south is about 35 fms., but there is no indication at present of any improvement in either of the ends, and I cannot recommend the driving to be resumed. The strata in this level appears to be in a very disordered and broken state, occasioned by a slide, and a large quantity of elvan. In sinking the engine-shaft from the 30 to the 50 fm. level, there are some branches passing through the shaft dipping from west to east, one of which branches is intersected in a plat cut on the eastern side of the shaft, in the 40 fm. level, and from which a large stream of water is issuing, and has drained the workings in the 30 fm. level over. In the 50 fm. level a cross-cut has been driven east about 14 fms.; 8 fms. from the shaft a small lode or branch has been intersected, which appears to be very much disordered by a slide running nearly parallel with the cross-cut, and dipping north. A level has been driven south on this branch, about 5 fms.; the end now presents a more kindly appearance, and had not the shaft been 10 fms. below, I should have recommended a further extension south on its course; but I find, at the depth of 60 fms., a cross-cut is now being driven east, towards this lode or branch; and, according to its dip, where seen in the 50 fm. level, there is about 3 fms. more to drive east to intersect it. My opinion is, that there will be an improvement when intersected in the 60 cross-cut, as the strata appears to be in a more settled and compact state than has been met with in the upper levels. It is my opinion that you have the same lode which is found so productive in Wheal Mary Ann and Trelawny Mines; only, in your sett, it is split in branches, occasioned by the disordered state of the ground; and I would recommend you to lose no time in sinking your present engine-shaft at least 20 fms. deeper. I have come to this conclusion, seeing that a great change in the strata has taken place in the last 5 fms. sunk in the shaft; and I believe, when you get a sufficient distance from the influence of the slide and elvan, you will find the lode productive.

RUNNAFORD COOMBE MINING COMPANY.

A meeting of shareholders was held yesterday at the Black Eagle, Woolwich, to receive the report of Messrs. Morris and Lea on the financial accounts of the company since its formation. At a meeting held on the 30th Sept., it had been resolved that Messrs. Morris and Lea should be appointed auditors, and in that capacity examine the accounts of the company; at the same meeting, a call of 5s. per share was made. At the meeting yesterday, the report of Messrs. Morris and Lea, with the annexed statement, was approved and received. By the statement in question, it appeared that the amount received on calls has been 389*l.* 6s.; sale of tin, 1259*l.* 8s. 7d. =5153*l.* 14s. 7d.—Working cost, &c., 505*l.* 19s.; dues paid, 83*l.* 19s. 1d.; leaving balance in banker's hands, 18*l.* 16s. 6d.—It was further shown that, after the payment of all liabilities, the amount due to the company, and in favour of the mine, would be 54*l.* 2s. 8d.—Thanks were voted to Messrs. Morris and Lea for their careful investigation of the accounts.—The following report, from Capt. Hooper, which was deemed very satisfactory, was read to the meeting:—

Oct. 29.—In presenting you my report, I beg to say in the 10 fm. level we have driven 2 fms. 2 ft. on the course of the lode, which is about 2 ft. wide, composed of spar, capel, peach, and tin, and is underlaying about 4 ft. in a fm.; the men have for driving 7*l.* 10s. per fm., extent 3 fms. I think in about a fortnight more we shall hole the winze, there being about 8 or 10 ft. to drive to get under it; but, if possible, I will get a boyer hole through the latter end of the week. I would recommend you to drive westward in the 10 fm. level, for in cutting through the lode we took out some good stones of tin; and in driving a few fms. we shall get under the place where Mr. Henderson broke that fine stone of tin in the adit level, and where such a good bunch of tin is gone down from the adit level. I think if the lode continues as we have had it for the last fortnight, that, with 16 men (including the ends and back), we can return from 6 to 8 tons of tin per month, and I am expecting an improvement in the end every day. I fully believe it will make a lasting and profitable mine.

WEST NANT-Y-MWYN MINING COMPANY.

At a meeting of adventurers, held at Truro, on the 9th October,—Mr. J. T. TREGELLAS in the chair,—it was resolved that the undertaking should be divided into 1020 shares, and be carried on on the Cost-book System.—Capts. Matthew Francis and Robert Tyack were appointed mining managers, and Mr. H. Ellery, secretary, all *pro tem.*—A call of 1s. per share was made, and the expenses of a deputation to the mines, 26*l.* 5s. were charged to the mine.—The report made by Capt. Francis on the mine, was read to the meeting, from which we extract the following:—

On the western side of this river (Towey), the grant of West Nant-y-mwyn commences. I paid considerable attention to the configuration and composition of the ground, so as to be able to argue from analogy as to the probability of a continuation of the Nant-y-mwyn lodes into this grant, and as to the chances of the produce being of similar quantities. I find that the form of the ground is expressly analogous; and I have no doubt the conformation of the surface depends upon the same subterranean causes. In the first place, the great strength of the cornet lode has prevailed against the agency that has degraded the surrounding ground for centuries; and this immense vein presents a crest-like form, extending out of the surrounding landscape, and surging eastward and westward at right angles with the river for a considerable distance. In the second place, the soft lodes to the northward have given way to the action of the elements, and formed a valley parallel with the great ridge formed by the elevation of the cornet lode; and what is a singular corroboration of the argument of analogy is, that large works of lead ore have been found on the surface of the peat-moss now covering these valleys, or depressions, which, I contend, are caused by the wearing away of the surface under the line of the soft lodes, and from the presence of these boulders of lead ore on the line of the lodes that produces so much ore at Nant-y-mwyn, I conclude that similar formations will be found when the lodes are fairly exposed in West Nant-y-mwyn grant. I would also add, in further confirmation of this view, that the same lodes appear at the surface about 400 fathoms further to the westward, and these have every appearance of being metalliferous, and some tons of lead, in this place, have been extracted from them.

I would direct the operations for the present to the cross-cutting the surface of the rising ground from the river along the face of the hill, in a line with where the tumblers of ore were found, to the depth of the rock. This mode of trial will be done at a trifling cost, as trenches of 6 ft. in depth can be made for about 1s. 6d. per fathom. I would also lay open, by the same process, the backs of the lode from the river westward. A small outlay only will be requisite to carry on these operations, and the work should be continued as long as it may be found necessary for fairly laying open lodes in the sett. I should suppose two months would be sufficient time for the discovery of most if not of all the lodes, but it may be desirable to do much more in extending lengthwise upon them in pursuit of the ore ground. In conclusion, I would only refer to the ultimate plan of operations, supposing bodies of ore similar to those of Nant-y-mwyn to be discovered, which I have no doubt will be the case, and this would be to carry an adit level into the western hill on the most convenient lode, and the others could be reached by means of cross-cuts at suitable distances. The main adit would soon obtain a very considerable height of back, as the ground rises precipitously, thus affording ore ground that would last for a long period. At the mouth of this adit there is a most convenient site for crushing machinery, ore floorings, and the requisite offices, as well as for the application of any water-power that may be necessary for working the mine below the adit. I have the strongest confidence that these operations will lead to the discovery of ore gound of the same description as that of Nant-y-mwyn, and that consequently the prospects warrant the expenditure of the money necessary for opening the mine.

WHEAL VINCENT MINING COMPANY.

At a meeting of adventurers, held at the offices, on the 26th Oct., Mr. MURRAY went into lengthened details on his recent visit to the mine, and its prospects; the result being, that at a cost of about 70*l.* per month the mine may be fully developed, by means of a new shaft, to be sunk in proximity to the present engine-shaft, and at 20 fathoms in depth to work on the course of the lode, where there is the most promising lode yet discovered in the sett; and Mr. Murray is of opinion it will prove a rich lode, and make good and profitable returns of ore. It was unanimously agreed that the said shaft be commenced immediately, under Mr. Murray's instructions to Capt. Reynolds; and from the nature of the ground, down to the 10 fathoms, it was anticipated that the cost would not exceed 50*l.* or 60*l.* to that depth, nor the time to reach the lode more than three months. About 1½ ton of fine tin was on the mine, and ready for sale.—A call of 10s. per share was made: and, in reference to shares now in arrear of calls, it was resolved that unless they be paid on the 11th Nov. they then become forfeited.

GALVANISED IRON COMPANY.

At the fifth half-yearly general meeting of shareholders, held on Friday, the 25th Oct., at the London Tavern, under the provisions of the "Dissolution Act," obtained in 1848, a series of resolutions were agreed to, having reference to the transfer of the contract concluded with Mr. Field, purchaser of the company's interest in the patent, &c., to Mr. C. W. Tupper and G. B. Carr, which transfer was accepted and confirmed by the meeting. It was also resolved that the outstanding liabilities of the company, with the arrears of calls still due, should be referred to a committee of shareholders, to report on the most expedient course to be pursued, either at the next general meeting, or one specially convened. Messrs. Bell, Hall, Grueber, Kelly, Page, and Dipnell, were named for the committee. The report of the directors went at much length into the circumstances in which the company is placed, and stated that considerable progress had been made in the task assigned them since the last meeting. Previous surrenders of leases had been effected, compositions in respect to unpaid calls agreed to, and other steps taken, with a view to a satisfactory arrangement of the company's affairs. The suit pending with Mr. Malins also forms a prominent feature in the report, which received the full approbation of the meeting.

COMPANY OF COPPER MINERS IN ENGLAND.—A meeting of the Court of Assistants will be held on Wednesday next, in order to determine the course to be pursued in the present crisis of affairs. Most probably a general meeting of the shareholders will shortly be called, as the principal securities will fall due on the 6th inst. Active measures are about to be adopted by the Shareholders' Committee, appointed in April, 1849, in order to reconcile the different interests. Any measures brought forward, independently, must militate against the general benefit; and though grounded on justice, at the same time they are injudicious, and will prove prejudicial to the best interests of the company.

CAMBORNE CONSOLS.—So few shareholders assembled at the adjourned meeting on Thursday, that it was deemed advisable that another adjournment should take place, to some day appointed by the board of directors, although the votes represented by proxies and otherwise were stated to be 786 out of 1000. Meanwhile, the best means by which further capital may be raised, and beneficially applied, it was stated, will be considered. The accounts were shown, but will not be published until formally passed by a general meeting; it may, however, be briefly stated it would appear by them, that from the 1st of May, 1848, to the 1st of October last, a sum of 2872*l.* 5s. has been expended in the working of the mine; while, calculating the value of mine setts, buildings, &c., at cost price, exclusive of the outlay for working the mine, the excess of assets over liabilities was estimated at 3513*l.* 18s. 8d.

NORTH WHEAL ROBERT.—We are authorised to state that the gentlemen in London connected with this adventure fully believed that the sett *adjoined* East Wheal George; but, on inquiry, they find there are a few hundred fathoms between them.

THE ANGLO-CALIFORNIAN GOLD BUBBLE.

SIR,—That the concoctors of this precious piece of humbug are most consummate wags, as well as knaves, there can be no doubt, when we Anglicise the name selected for their imaginary El Dorado—"Santa Vaga"—meaning neither more nor less than "Saint Vague," or "VAGABOND!" Vague enough—there's bubble in the very name. Again, the dupes are told to look to the "Mariposa." Take care, good people, for Mariposa means "butterfly," and butterflies have but brief existence. Mariposa also means "rushlight"—or, rather, a small floating light—a very faint light, but quite sufficient to burn your fingers. Are they not wags then? and are they not knaves also? Is it not proved by the exaggerated and fallacious statements put forward in the first place, and by the way in which the unwary and simple country people were inveigled into the concern by promises of 70 per cent. certain in this present October? It was only within the last two months that I discovered that a relative of mine, in one of the provincial towns, had been so duped. The only comfort I could give him was, that he might think himself well off if he were not eventually called upon for more money.

But, SIR, under what authority did the directors call for 10s. per share? Not, surely, under that of the Joint-Stock Companies' Act; for there it is expressly stated that the deposit is not to exceed 10s. for every 100*l.* subscribed.

Now, the prospectus of the "Anglo-Californian Gold Mining and Dredging Company, provisionally registered pursuant to the 7th and 8th Vic.," sets forth that the capital is to be 50,000*l.*, in 100,000 shares of 10s. each, the whole to be paid on allotment, which (whatever others may think) I believe the Registrar of Joint-stock Companies will tell you is illegal, the power before complete registration being restricted to the 10s. per cent., as above stated. Were it not so, what would be the use of all the covenants, as to calls, &c., required in the Deed of Settlement? and what protection would the Act of Parliament afford to the public against fraudulent or bubble schemes? The very fact of a concern of 50,000*l.* capital being brought out in 100,000 shares should at once create distrust. The public may rest assured, that the 10s. per share so paid in full might, with less danger to their pockets, be laid out in the purchase of a lottery ticket, or in a Derby sweep, there being a certain other Act of Parliament, called the Winding-up Act, which may come into operation rather unpleasantly on some future day; for be it observed how cleverly the prospectus states that the guarantee against all further liability is to be given by "the company." Mark! not by the directors or promoters, but by the company—that is, the shareholders are to guarantee themselves.

P.

ASTURIAN MINING COMPANY.

SIR,—I have waited patiently to see whether or not the ex-directors of this company would emerge from the dignified silence which succeeded their "emphatic denial" of the statements of the third interim report of the Committee of Investigation, to point out the errors or misrepresentations of that preliminary accusation. I hoped to sustain the interest of the discussion by allowing one "on the other side" to speak out, in order that too much of the same *pabulum* might not pall the appetite of your readers; but my hopes have been vain. Discretion, says the proverb, is the better part of valour, and delinquency is a topic which cannot be discreetly stirred up by those who can only resort to *emphatic denials*. For lack, then, of the natural provocation which would give me something more tangible than the general issue to deal with, I must take up the plea of not guilty which has been recorded; and if you can afford me space, without prejudice to your more interesting matter (though the present subject is not without its instruction to the uninitiated in the mysteries of *scheming*), I think I may pledge myself to prove the affirmative of all the charges we have ventured to broach, and that by day and date, and documentary evidence, which must satisfy the most incredulous that the present proceedings of the original directors and promoters of this company, in concert with the proposed purchasers, are meant solely to cover their enormous responsibilities to the shareholders, who have been so long their dupes.

But first let me premise that the character of the report referred to has been generally mistaken. It has been called a series of charges, an indictment, &c., and truly the matter of it gives much colour for thus describing it. Yet a closer consideration will, I think, justify my assertion that it is not so much an accusation as an excuse for delaying that accusation, in order to mature the proofs—a statement of the grounds for insisting that the investigation of the accounts and affairs of this company should be more deliberate and strict than in cases where no evidence could be established of *mala fides*. The actual charges are more serious in amount than those which are embraced by that report, and are there merely, *en passant*, glanced at by reference to the Chancery proceedings. If I can show, as I shall attempt to do, that the facts stated are beyond dispute, it ought to suffice to bring to shame those who have so unblushingly deceived the shareholders by the misrepresentations which, as I am informed, were put forth at the meeting of the 10th of September last. Let me, by way of parenthesis, protect myself by observing, that if I should misstate what then occurred, the blame must not fall on my head, but rest with those who had not the courage to risk publicity by the admission of the press. With so justifying the report, I shall not remain content; when the proper time arrives (I mean as soon as the questions raised by the proceedings in Chancery shall be decided) I will turn to the main points of our impeachment; and I fear not that I shall fail in substantiating even one of the charges that have been made.

The course pursued at the last meeting was, I understand, to evade the discussion of the report, on the ground that it had not been officially presented, and to deny its veracity *in toto*. It is true, I believe, that the directors were moved from this policy for a moment by queries upon a very salient, although ludicrous and comparatively trivial, subject—the allowance of director's fees to *a lady*. It was answered that mere convenience of entry was the occasion of that irregularity. Nothing can better illustrate the servility of the constitution of the meetings of this company—of which I have before complained in your columns—than the fact that this excuse passed current on the 10th Sept. The effect of the mesmeric passes of a Marlborough over canine ferocity were not more successful or unaccountable than the satisfaction given by the explanation of the secretary respecting our *petticoat* Government. It so happens, however, that the matter was not sufficiently probed; and although the form of the entries was convenient—and, no doubt, it was *very* convenient—still it occurs that the report is not the less literally and actually correct, for no justification whatever existed for the allowance of those fees. Assuming for the sake of the argument, what I deny, that there was any basis save fraud for the payment of fees to any director, here there can be no apology. The qualification shares of the nominal director had been sold; another requisite for earning fees, attendance at the board, was wanting; and even on the ground that this party was rendering service to the company during his absence (which was for his own convenience, under circumstances now known to all), there can be no justification of this allowance. I need not refer to the testimony of eye-witnesses to his interference at our works, where, as it is described, nothing but confusion was the result of it. To know that one of the effects of that interference was the removal of quicksilver, to the value of 279*3l.*, without any account of the proceeds having been entered in the books of the company to the present day, is quite enough to warrant me in insisting that, even on the pretence of supererogatory, or extra-official work, this credit was not due.

Who were the parties to this act of wanton improvidence is easily ascertained by the minutes of the directors' meetings, where it was discussed and sanctioned. I am deceived if it will not appear that he, who is so filled with virtuous indignation at being associated with persons charged with fraud, was present, if not himself the mover, when the generous resolution passed to save the shares in which a colleague was interested from forfeiture (for that was manifestly the object), whilst so many other unfortunates had their property confiscated for non-payment of calls. The imputation with which I thus conclude this case is susceptible of being converted into a more defined form. The documents and facts will speak for themselves. I abstain from adding any details, from a wish to spare the names and feelings of the parties associated in the affair; but, if necessary, I will substantiate all I have stated or insinuated. I shall, with your permission, return to the subject next week; and, in the meantime, I beg to place at your disposal all the documentary evidence in the case, from which you may perceive that *nonchalance* is not the answer which ought to be given to our charges, and, still less, by the class of persons with whom we have to deal. Furthermore, that we are right in appealing to a tribunal, which may be less complacent, or more intelligent, than a meeting of Asturian shareholders, to whom such answers are acceptable.—A SHAREHOLDER: *Oct.* 31.

ON THE GRANITE OF EXMOOR.

SIR,—Having been from home for the last fortnight, surveying mines and quarries in Devon and Cornwall, I had not an opportunity of perusing your valuable Journal until my return, when I was very much amused to see Mr. Moore's remarks. They put me in mind of the horse I rode on my journey; where the saddle fitted so tight as to gall his back, and when I alighted to relieve him, he attempted to kick me. And in reply, I again reiterate what I have so often stated, that I am no enemy to legitimate mining: let every man bringing out mines, or reporting on them, act fairly to the best of his judgment, and time will test it; but when men go so far as to state untruths, or to tell what will be found 10 fathoms underground, which no human eye has ever seen, I think it is time some one should make a passing remark, to rouse the unwary shareholder. Had he stated that there was any peculiarity in the features of the mine that gave him reasonable grounds to expect a certain thing would occur at a given depth, it would have been quite a different case; I should have admired such remarks, and set the writer down as a watchful and thinking man. But when I see prospectuses, or reports, come out that I suspect are not authenticated truths, the promoter will deceive himself if he thinks, by his remarks, to intimidate me from calling public attention thereto; I have battled too long with the breeze to be frightened at the sound of every one who sets himself up for a mine reporter.

I am aware that a Mr. Moore was made agent a short time since for giving a high report of a mine on Exmoor: this report rose the wind for the time, but, fearing they should again become becalmed, some interested parties began to bestir themselves, and see what mighty feats, by energy, they could accomplish; they brought out an eye with a power even beyond Lord Rosse's telescope, and discovered the granite mountain and lime deposits, so congenial to the formation of copper, in an iron lode, in the edge strata of Exmoor; and even saw and revealed to us Nature's beautiful law working 10 fms. under the earth, where she is depositing her copper in the 34 fm. level. What a discovery in the nineteenth century! Who would now refuse to engage in mining? it is no longer a speculation; they have only to call to their aid these men of revelations, and they will tell them the exact depth ore is to be found; and, I have no doubt, for an additional fee, they will give to private individuals, unskilled in mining, the quantity of copper there deposited. Under these circumstances, I hope the public will not frown on me for bringing their names before them:

still, a little caution is required, as they are wary fellows, and in Co. more than two, and, no doubt, have many a bal to sell. What a retaliation I must expect when they get to the riches in the 34 fm. level! So much for Exmoor.

I shall next touch on another rich district in the north of Devon, pronounced by these men to be one of the mighty wonders of the world, where they had no need to make use of their strong visionary powers, as masses of ore were to be seen by any common-eyed person that passed by.

I called, and was taken for a "greenhorn." And what a tale they spun me! which ended in my offering to stake a sum of money against them, as to their raising a named quantity of ore in a given time, which brought the gall on their back to a fistula before I left, the anguish of which brought them out in your Journal. Under these circumstances, I will not attempt to injure the feelings of men who are already labouring under a disease that learned doctors have pronounced incurable, and only say, in return to the remarks on my practice in mining, that it is too well known to need any comment from Mr. Moore; and I will tell him that I commenced my career in the Great St. George, when I was only 10 years of age. I never managed an antimony mine. I left an engine-shaft in the west of Cornwall to go to Treburget, to supersede a lynx-eyed man like himself, who could see the end of a rainbow, but could never reach it. I was recommended to the company (perfectly unknown to me) by the old Capts. Hitchins and H. Brenton, whom we may fairly set down for the founders of mining in the Tavistock district.

From my known practice, I was selected by Mr. Ross, in 1822, who was then manager of all the Beeralston Mines, to go out to Columbia; he came 50 miles to try to prevail on me to accept the situation. It was the first party going out to that country after they had declared their independence.

I was again applied to by Captain H. Brenton, to go out for a party he was connected with, in 1825. I have the correspondence now to prove it, and showing I had the preference over all these visionary miners in that extensive district. If Mr. Moore is not satisfied, I have not the slightest objection to publish the same.

N. ENNOR.

THE EXMOOR MINING DISTRICT.

SIR,—In looking over your valuable Journal of the 19th inst., I observed the remarks by Capt. R. Moore, where he attempts to bear out Capt. Fezzy's report on the strata of Exmoor. I have had the pleasure of examining that forest, by the permission of F. Knight, Esq., for the purpose of discovering lodes, lime, &c.; but could not find either traces of lime or granite on the forest, but we did certainly fall in with a few iron lodes—not one of which is favourable for copper. Elvan courses there are, which can be found in almost any district. I find that there is a bed of coarse pipe-clay; but very different from that of china-clay which is found in the granite hills of Cornwall and Devon. That on the Exmoor is a decomposed killas; and that which is the china-clay from the hills of Cornwall and Devon is from the decomposed granite, which is not found on the Exmoor.

As regards the remarks made by Mr. R. Moore on Mr. Ennor not being a practical miner, they show the ill-feeling of Mr. R. Moore towards Mr. Ennor, as it is well known that Mr. Ennor has been a practical miner from his youth, and has had experience equal to any miner in the kingdom; and it may be said that he is the original miner and the recent quarryman, and not the original quarryman and recent miner; and it was not until he left the mines of St. Teath that he engaged with T. R. Every, Esq., as an agent on his quarries. It is also well known in the county of Cornwall that he paid great dividends, both from the mines and quarries, by his strict observance and economy of working—a rule that should be observed in all mining speculations, where the agents intend to make dividends to their adventurers. If Capt. Fezzy will point out on what part of the forest the granite is to be found, it would greatly oblige us, as we may have overlooked it, and shall feel glad for the information.—J. C.: *Roche, Cornwall, October* 30.

THE COPPER MINERS' COMPANY.

SIR,—I have hitherto refrained from noticing your report of the meeting o the Copper Miners' Company, of the 3d of April last (which appeared in your Journal of the 6th), because I thought it better to let the legal proceedings speak for themselves; but, as an attempt is to be made to get rid of the question upon technical grounds, supported by evidence which, in all probability, will give rise to criminal proceedings, I feel it incumbent, after the remarks made in your Journal, to put you in possession of the true state of the case. The portion of the report I allude to is as follows:—"It was moved by Corbet Hue, Esq., seconded by A. F. C. Lawrie, Esq., and carried unanimously, that it is the opinion of the Court, that Mr. Lord's application for a 'mandamus,' should be opposed, and that the expenses of such opposition should be borne rateably by the whole body of the proprietors."

The meeting in question was called by advertisement in the *London Gazette*, for the election of elective officers only, the usual notice by circular being dispensed with, and no notice given of the above motion, which was submitted, it having been ascertained from me that I should not be present!

The "mandamus" in question is simply calling upon the Court of Assistants to register my preference shares in "shares," and not in "stock," the Court of Assistants having, by a bye law, which was made known to a meeting of shareholders on the 11th Feb., 1848, converted "shares" into "stock," as by the following extract from the report:—"Resolved, that the old shares in this company, of whatever amount paid up, and the preference shares of 25*l.* each, paid up in full, and duly registered, be deemed and taken to be so much money stock of each class respectively; and that each shareholder stand in the register as possessed of so much stock as the sum paid up on his share or shares amount to, and that transfers may take place of any amount of stock whatsoever."

In order more fully to understand the meaning of this resolution, it is necessary to refer back to the meeting of the 13th of October, 1847 (reported in the *Globe* newspaper of the 15th of that month), when it will appear that Mr. Alderman Carden, having elicited from the chairman that 60,000*l.*, calls on the old shares in the company, remained unpaid, but on which the dividend had not been paid, observed that was not sufficient, and recommended a forfeiture of the shares, for those parties might, when the company was in a state of prosperity, pay up their calls, and place themselves in the same position as those who had borne the burthen of the difficulties. The Chairman replied, the question should be submitted to the solicitor of the company, and the result laid before the shareholders at the next meeting, and at which said meeting the Court announced that they had met the difficulty by converting shares into stock, under legal advice, by a bye law, and against which I, at the time, protested; and having in vain requested to have my scrip certificates registered in my name in the books of the company as "shares," I have been compelled to have recourse to the present legal proceedings to enforce the same. Mr. Hue's resolution is embodied in the affidavit, as forming part of the defence!

Putney, October 28. W. H. LORD.

MINE MANAGEMENT.

SIR,—As frequent differences arise between the purser and managing captain of a mine, respecting the nature and extent of their respective duties, I should feel obliged by your inserting the following definition of what properly devolves on them.

ONE INTERESTED.

The duty of a purser where the captain is manager:—

1. The duty of a purser is more particularly confined to the financial department, which includes the paying and receiving all moneys on account of the working of the mine, having vouchers for such of the amounts as may be necessary, to be produced (if called for) at the meeting of the adventurers.

2. He should see that particulars of all the materials received for the use of the mine are entered in a book kept for that purpose, and give directions to the manager and clerk that no materials be received without a way-bill.

3. He should give orders for every article, matter, and thing, required for the adventurers and agents, on account and other business days.

4. He should be advised by the manager if any very expensive material or erection is required, whether for the surface or underground department, and both join in such order.

5. When the ore (of whatever description) is prepared and ready for market—such information to be furnished by the manager—he should seek out purchasers and effect the sales.

6. It is his duty, after consulting the adventurers and manager, to cause to be sold such of the materials as may be thought necessary, whether spare, or at the abandonment of the mine.

MINING IN CARDIGANSHIRE.

SIR,—Last week I observed in your valuable Journal a letter from "Fact," desirous of setting public opinion on a right basis respecting Cardiganshire mining; and I can only say that, actuated by the same desire, I am tempted to offer a few remarks on the mines in this county, without going into particulars as to the advantages America may have over us, but hoping it may prove beneficial to the public in general; and I shall be content, after the perusal of both statements, by parties drawing their own conclusions on the matter. To come to the point at once, "Fact" states as to Cardiganshire, the royalty being double of what it is in some parts of England, is a reason why its excellent mines (which are few) lay so long dormant. Now, I do not mean to argue for a moment that high royalties are not prejudicial to mining, but it is satisfactory to find that a more liberal spirit has already began to actuate the landed proprietors of the county; and I can, if necessary, instance several mines now let at 1-14th and 1-15th royalty, where the same land could not be had, some few years past, under 1-10th royalty. No doubt but what the parties who worked the mines enumerated by "Fact"—viz.: Cwmystwith, Logylas, Talybont, Goginan, Cwmsymlog, Daren, Eagair Mwyn, and Frongoch—were shrewd geologists; and that they made immense profits is so well known, that they need no comment from any one. In addition to the above, there are many others that have yielded very large profits, and with a small capital for laying open ground, and the erection of machinery, they doubtless will again. We may name Bromfloyde, Eagair-her, Bwlch Consols, Cwm Erfin, Gelliseirin, Grogwinion, &c., and many others; but until we get the rest of the novelties promised by "Fact," I refrain, for the present, mentioning more. There has as yet been but little attention paid to this vast mining field, but it is gratifying to find that, where capital is being judiciously expended, the mines are becoming very valuable, and a few more months will prove this to many who do not wish to believe it at present: and looking at all the mining capital expended in this county for the last 15 years (and some of it, I am sorry to say, expended very injudiciously), I do not think there is much reason to complain, as at least a return of 85 per cent. per annum can be shown.

Goginan, Oct. 29. A WELL-WISHER TO CARDIGANSHIRE MINING.

SOUTH CARN BREA.

SIR,—A letter was published in last week's Journal, signed "Vindicator," containing statements, the tenor of which I might be well contented to pass unnoticed, if they affected myself only, but as they extend to other people, and are also calculated to mislead the minds of parties interested in the case, I think it is my duty to state publicly, that the counterpart of the sett is not lost, and that I never "offered to take a quarter part of the whole number of shares into which the mine is divided, if the holder would relinquish the present lease and take a new one, dropping some of the advantages secured by the existing instrument." The "professional gentlemen" alluded to are Messrs. Smith and Roberts, of Truro. Merely to announce this, I feel is sufficient to supersede the necessity of defending them from the coarse and ridiculous remarks made upon them by "Vindicator."—E. C. MARRIOTT: *Tehidy Park, Truro, Oct.* 31.

WHEAL PROVIDENCE.

SIR,—In your report last week, of the proceedings of the "Lamheroce Wheal Maria Mining Company," it is stated that "the secretary was requested to inform Capt. Thomas Penaluna, of Wheal Providence, that the company would accept accession of a certain portion of land belonging to Wheal Providence, to enable them to work on the A lode." This is the first intimation the adventurers in Wheal Providence have had of such an application; and fully agreeing, as I do, with Mr. Murray, who stated at the Lamheroce meeting that "it was more probable that a lode in any way approximating to the Great Wheal Maria would be found in the north rather than the south side of the sett;" and having in Wheal Providence, among others, a gossan lode, twin sister of the Maria lode, respecting which the highest expectations are entertained, I can only say that a cession of any portion of our ground is not likely to take place. The recent discoveries in Wheal Providence in the eastern ground, towards the Great Wheal Maria cross-course, which intersects our lodes, and the discovery of the great gossan lode on the southern side towards Wheal Maria, render such a circumstance still more improbable. If anything were required to enhance the value of the mine in the estimation of the shareholders, the deeply interesting statement and statistics of Mr. Murchison, in your last Journal, would unquestionably effect it. Having, in the opinion of Mr. Evan Hopkins and Mr. Symons, the most valuable mineral ground in the district, I conclude that we shall not cede any portion of it to the Lamheroce Company. Possibly there was some inaccuracy in the statement.

London, Oct. 31. THOMAS HARVEY.

THE DEVON GREAT CONSOLS—MACHINERY.

SIR,—In looking over your valuable Journal of last week, and having read Mr. J. H. Murchison's description of Devon Great Consolidated Copper Mines, and its machinery, we beg to correct a slight error with reference to the large water-wheel. Mr. Murchison, in describing this piece of machinery (which doubtless is well known to many of your readers, who are aware, in consequence, who the engineer was), ascribed to us its construction; and as we are not willing to carry the laurels belonging to others, we beg to put Mr. Murchison right on the subject. The engineer was Mr. Nathaniel Smith, who for many years was under Messrs. John Taylor and Sons, at the Great Wheal Friendship, but has since been appointed engineer at the Devon Great Consols. We were merely the founders, and working engineers in fitting the work, in accordance with the drawings of Mr. Smith. NICHOLLS, WILLIAMS, & Co.

Bedford Iron Works, Tavistock, October 30.

PROPOSED MINING EXCHANGE.

SIR,—Having read the letter in the *Times* on mining business, it was with great interest I awaited the publication of your Journal, and it afforded me (in common, no doubt, with many of your readers) great pleasure and satisfaction to see the straightforward manner in which you have urged the subject upon the brokers and agents. That a Mining Share Exchange, and also an authentic list, to issue from a committee, ought to exist, there cannot, I should think, be two opinions. Another system of charges among the brokers is also needed. Why should they not charge a distinct commission, instead of including their fees in the amount to a "buyer," and giving only the net amount to the "seller," leaving both to *guess* at the expenses they have been put to. In all railway transactions on the Stock Exchange (knowing the fixed rate of charges), you can, on reference to the daily list, calculate pretty nearly what net sum you can obtain, and it ought to be the case with mining shares, which, by the exercise of a little judgment, are a more valuable investment.

If, as you say, the brokers set about the establishment of a Mining Exchange with caution, they need not fear that their clients will leave them; on the contrary, they will attract new ones, and extend the range of mining capital. Although but recently an investor in mines, I have already felt considerable doubts, and experienced the necessity of such a change. Railway shares, bad as many of them are, are bought and sold as property in a fair open market; and if mining shares are not transferred in the same way, the public will begin to think that the majority of mining tranastions cannot *bear the light*.

Wells, Oct. 28. A SUBSCRIBER.

MINING SHARE EXCHANGE.

SIR,—I have read with much interest the remarks in the daily papers, having reference to the formation of a Mining Share Exchange, and in common with others interested in mining adventures, attended the meeting held on the 29th October, which I should have been glad, as we say in Cornwall, had it been composed of "One and All;" however, I do believe the best was meant by "all" parties, not excepting "one." Some considered the meeting premature, others declined attending because they were pursuing their own course of operations, while others again, felt that any movement of the kind should be public. Who is right or who wrong, where, I believe, all had but one object in view, it would, indeed, be hard to say; but this I do feel, that whatever measure be adopted, it should be prompt, and, moreover, have the determined support of

Cornhill, Nov. 1. "ONE AND ALL."

LATEST CURRENT PRICES OF METALS.

LONDON, NOVEMBER 1, 1850.

ENGLISH IRON. *a*	*per ton.*		
Bar, bolt, &square, London	£5	2 6–5 10	
Nail rods	6	0–6 5 0	
Hoops	7	0–7 10	
Sheets (singles)	7	12 6–8 5	
Bars, at Cardiff & Newport	4	10–4 12 6	
Refined metal, Wales*	3	5–3 12 6	
Do. anthracite*	3	10 0	
Pigs in Wales	3	0–3 5 0	
Do. do. forge	2	5 0–2 10	
Do., No. 1, Clyde ... *net cash*	2	2 6–2 3	
Blewitt's Patent Refined Iron for bars, rails, &c., free on board at Newport*	3	10 0	
Do., do., for tin-plates, boiler plates, &c., ditto	4	10 9	
Stirling's Patent in Glasgow	2	15 0	
Toughened Pigs in Wales	3	10–3 15	
Staffordshire bars, at the works	5	5–5 10	
Rails	4	12 6–4 15	
Chairs (Clyde)	4	0 0	
FOREIGN IRON. *b*			
Swedish	11	7 6–12 0	
CCND	17	10–18 0	
PSI	15	0 0	
Gourieff	14	10 0	
Archangel	13	10 0	
FOREIGN STEEL. *c*			
Swedish keg	14	0–14 15	
Ditto faggot	15	0	
ENGLISH COPPER. *d*			
Sheets, sheathing, & bolts, *p. lb.*	0	0 9¼	
Tough cake *per ton*	84	0–84 10	
Tile *per ton*	£83	0–83 10	
Old copper *e* *per lb.*		8¼d	
Yellow Metal Sheathing		8d	
FOREIGN COPPER. *f*			
South American	77	0–86 10	
ENGLISH LEAD. *g*			
Pig *per ton*	16	10–17 10	
Sheet	17	15–18 15	
Pipe	18	10 0	
Red lead	19	0 0	
White ditto	25	0 0	
Patent shot	20	10 0	
FOREIGN LEAD. *h*			
Spanish, in bond	16	0–16 10	
ENGLISH TIN. *i*			
Block *per cwt.*	4	0 0	
Bar	4	1 0	
Refined	4	6 0	
FOREIGN TIN *k*			
Banca, H. C.	4	0–4 1	
Ditto, for Export only			
Straits	3	18–3 19	
TIN-PLATES. *l*			
IC Coke *per box*	1	6 9–1 8	
IC Charcoal	1	12 6–1 13	
IX ditto	1	18 6	
SPELTER. *m*			
Plates, warehoused *per ton*	16	10–16 15	
Ditto, to arrive	16	0	
ZINC. *n*			
English sheet *per ton*	19	10–21 0	
QUICKSILVER *o* *per lb.*		3s. 9d.	

Terms.—*a*, 6 months, or 2½ per cent. dis.; *b*, ditto; *c*, ditto; *d*, 6 months, or 3 per ct. dis.; *e*, 6 months, or 2½ per cent. dis.; *f*, ditto; *g*, ditto; *h*, ditto; *i*, ditto; *k*, net cash; *l*, 6 months, or 3 p. ct. dis.; *m*, net cash; *n*, 3 months, or 1½ p. c. dis.; *o*, ditto, 1½ dis.

* Cold-blast, free on board in Wales.

REMARKS.—Welsh bars are firm at 4*l.* 12s. 6d., with about a month to specify, with buyers at 2s. 6d. less to a considerable extent; orders for rails continued to come forward to a considerable extent. No change to report in Scotch pig, buyers at 42s., and sellers at 42s. 6d. for cash, and 1s. more for three months, open delivery. Swedish bars firmer, 150 tons sold at 11*l.* 12s. 6d.—English lead is in fair demand. A small parcel of Spanish sold ex-ship at 16*l.*, while 16*l.* 5s. is quoted to arrive shortly.—English tin is without alteration, and but little business doing. Banca, sellers 80*l.* and buyers 79*l.*, market very quiet. A fair business doing for present shipment in tin plates; for forward delivery, holders are disposed to sell on easier terms.—Copper continues firm, the makers are not disposed to enter large orders at present prices.—Spelter is quiet, 400 tons sold at 16*l.* 10s. and for delivery next year, in May and June, 16*l.* has been accepted for 200 tons.

LIVERPOOL, NOV. 1.—Our market for metals during the past week has been steady. The demand for copper and yellow metal continues undiminished, and our manufacturers are still under contract for some time to come. The trade, generally, appears to maintain a very healthy position; and we trust this satisfactory state of things may continue and become permanent. We had the opportunity, a few days ago, of inspecting some samples of copper from Adelaide, recently arrived, and found the ingots were of most superior quality—in fact, nearly pure copper. This speaks to the spirit of enterprise which the great discoveries at the Burra Burra, and other places, have elicited in that distant region. May they go on and prosper! Iron remains unchanged, at 4*l.* 17s. 6d. to 5*l.* per ton.

By the Overland Mail we have received advices as to the state of the metal markets. From Bombay, under date 3d October, we learn that the inquiry for nearly all descriptions of copper had declined. Heavy stocks are already in importers' hands, and large quantities are known to be on the way out; and the unfavourable advices from the interior made up-country dealers unwilling to speculate at present. In iron, English bar, sheet, and hoop had declined in value and demand, and the inquiry for square and round nail rod had decreased; while Swedish bar had receded in value. Spelter and sheet-lead had somewhat declined in price. Swedish steel and pig-lead remain as before. At Calcutta, the market for metals is unusually stagnant, scarcely any copper had been sold, and the low rates ruling fail to attract even an increased inquiry from Mirzapore. Spelter goes lower, week by week, without any symptom of demand for consumption. Iron, too, is at extremely depressed rates.

Current Prices of Stocks, Shares, & Metals.

MINES.—The actual amount of business has been limited during the week, although many inquiries have been made for shares in particular mines, among which are Bedford United, East and South Tamar, Alfred Consols, and Devon Great Consols.

Copper continues firm at the quotations; lead is in fair demand; tin without alteration, but little doing; and in tin plates there is a fair business.

The proposed Exchange for the transaction of mining business may be said to be in the right train for being speedily and vigorously carried out. The subject has been canvassed in the daily journals with a degree of earnestness proportioned to its importance and the interest it has excited in mining circles. We have no doubt that the leading brokers and mine agents who have undertaken the task of forming an open market will proceed firmly towards the completion of their project, unmoved by any casual ebullition of feeling which a movement of this kind is apt to elicit, and uninfluenced by the outcry raised in some quarters for a transference of all mining negotiations to the Stock Exchange. By an advertisement which appears elsewhere, our readers will learn the steps actually taken in furtherance of the plan, and the views contemplated by its promoters; and few will dispute the desirability of the objects aimed at, if, as we fully believe, they can be consistently accomplished. We augur much good from the meeting of yesterday evening, at which Mr. Thomas Field presided, as forming of itself a sufficient basis for future operations; and it is our earnest wish that no personal feeling will be allowed to mar the unanimity which should exist in carrying out such an object as a Mining Exchange, the benefits of which will be experienced, as its formation should be assisted, by "One and All."

The monthly sale of Herodsfoot lead took place on Wednesday, when 80 tons realised 11*l.* 12s. 6d. per ton=930*l.*

The Keswick Mines have sold 20 tons of lead ore—6½ at 10*l.* 5s. per ton, and 13½ at 11*l.* per ton.

At Tregorden, 5 tons of silver-lead ore have been sold, which realised 25*l.* 10s. 6d. per ton.

The following dividends have been declared during the past month:—

	Per Share.	Amount.				Per Share.	Amount.		
Wheal Basset	£10	£2560	0	0	Fowey Consols	1½	741	0	0
North Pool	15	1500	0	0	South Tolgus	2½	640	0	0
North Basset	¼	1500	0	0	Wheal Tremayne	½	512	0	0
Wheal Seton	5	990	0	0	Stray Park	½	500	0	0
Levant	5	800	0	0	Bryntail (Welsh)	¼	250	0	0

Ten per cent. has also been paid by the Union Tin Smelting Company.

At the North Pool meeting, held at the mine, on Tuesday, the accounts for July and August were submitted, showing—Balance end of June, 837*l.* 0s. 10d.; ores sold (less dues), 3778*l.* 1s. 11d. = 4615*l.* 2s. 9d.—To costs and merchants' bills, 2320*l.* 4s. 9d.—By dividend of 15*l.* per share, 1500*l.*: leaving balance in favour of adventurers of 794*l.* 18s.

At the North Basset quarterly meeting, the accounts were presented, showing—By ores sold, 5606*l.* 15s. 1d.—Mine cost and merchants' bills, 2975*l.* 4s. 2d.—By dividend of 5s. per share, 1500*l.*: leaving balance in favour of adventurers of 1131*l.* 10s. 11d.—The statements made relative to the present working and future prospects of the mine are of a most satisfactory and flattering description.

The statement of accounts presented at the two-monthly meeting of West Caradon adventurers, showed—Ores sold, Aug. 22, 2465*l.* 14s. 11d.; ditto, September 19, 2616*l.* (less lord's dues, 316*l.* 12s.); materials sold, 147*l.* 6s. = 4912*l.* 17s. 2d.—To salaries, counting-house expenses, engine-men, smith's work, &c., 260*l.* 12s. 5d.; tribute and tutwork, 1971*l.* 4s. 11d.; pitmen, tramming, and charges on ore, 930*l.* 14s. 2d.; materials and sundry expenses, 882*l.* 2s. 5d.; balance of profit on the two months, 868*l.* 3s. 3d.: to which add balance from last account, 2842*l.* 12s. 11d. = 3710*l.* 16s. 2d.; from which deduct law costs in case of Tucker *v.* Fox, 258*l.* 8s. 7d.; share of damages awarded against the company, including cost of arbitration, 3253*l.* 19s. 8d.—leaving balance in favour of adventurers to the end of Sept., 198*l.* 7s. 11d. The balance in hand being so small, no dividend was declared.

At the East Buller two-monthly meeting, the accounts showed—Balance last account, 410*l.* 3s. 8d.; cost for February, March, April, May, June, July, and August, 548*l.* 10s.; merchants' bills, 253*l.* 1s. 2d.; making debits, 1211*l.* 14s. 11d.—By calls, 1024*l.*; leaving balance against mine, 187*l.* 14s. 11d. A call of 10s. per share was made. The report states the engine-shaft is now down to the 15 fm. level, and there are about 12 fms. to cross-cut to the lode, but the ground being hard it is recommended that a flat-rod shaft be sunk on the lode to meet it. The adit is extended west of the engine-shaft on the lode 25 fms.; the last 15 has been through a good gossan. It is rarely that such a lode fails to produce great quantities of copper ore. In six months the 15 fm. level will be under this ground.

At the West Wheal Towan meeting, the accounts showed a total expenditure of 4300*l.*, and a balance against the adventurers of 800*l.* By the report, it appeared that since the commencement of operations in May last, a 60-inch cylinder engine had been erected and set to work, Taylor's and Caroline's shafts cleared to bottom, adit levels cleared and driven, railroads laid down, and all the preparatory work done for the trials on Wheal Tye, Middleworks, Great Wheal Towan, and other lodes, which are productive both of tin and copper. A call of 2*l.* per share was made, for the prosecution of the works of trial.

At the West Wheal Providence meeting, the accounts showed—Mine cost for June, 255*l.* 8s. 10d.; July, 264*l.* 13s.; August, 217*l.* 5s. 4d.; merchants' bills, 516*l.* 13s. 9d.=1254*l.* 0s. 11d.—Block tin sold, less dues, 642*l.* 0s. 5d.: showing loss of 612*l.* 0s. 6d. on the quarter, and a balance against the mine of 550*l.* 19s. 5d. A call of 1*l.* per share was made. From the report, it appears the south lode has been driven on 12 fms. in the 70, west of engine-shaft, worth 10*l.* per fm., and a winze sunk from the 60 to 70, on a lode worth 9*l.* per fm. In the 60 fm. level, west of cross-cut, the lode is poor. St. Aubyn's shaft has been sunk to the 55 fm. level, and driven west; the lode is worth 6*l.* per fm. The lode in boundary engine-shaft is sunk under the 70, lode worth 30*l.* per fm.

At the West Nant-y-Mwyn meeting, a call of 1s. per share was made. The adventure was divided into 1020 shares, and is to be carried on on the Cost-book Principle. A deputation had reported very favourably on the mine, and the report of Captain Francis, of the Goginan Mines, fully coincided in the views of the deputation.

At the Old Brimpts meeting, it was shown that the outlay had not exceeded 300*l.* in exploring the ancient workings and driving the shallow adit to intersect the south lode, which, since it was discovered, has been productive of tin ore valued at about 250*l.* In the above outlay the cost of cutting a leat, and purchasing various requisite machinery, is included. The mine was worked about 50 years since, but abandoned through mismanagement.

The Craddock Moor accounts, for July and August, show—Balance, 103*l.* 7s. 9d.; call of 10s. per share, 105*l.* 10s. = 208*l.* 17s. 9d.—Labour, &c., 79*l.* 4s. 9d.; materials, 30*l.* 15s. 2d.: leaving balance in favour of adventurers, 98*l.* 17s. 10d.

The Gonamena accounts, for July and August months, show—Balance, 72*l.* 10s. 5d.; by sale of copper ores, 260*l.* 19s. 2d.=333*l.* 9s. 7d.—Labour, &c., 126*l.* 5s. 9d.; materials, 94*l.* 8s. 9d.; lords' dues, 16*l.* 7s. 3d.: leaving balance in favour of adventurers, 96*l.* 7s. 10d.—The report will be found among the Mining Correspondence.

At the Bodmin Consols two-monthly meeting, held at the offices, on Wednesday, a favourable report was presented by Mr. A. Murray, jun., who had lately inspected the mine, which will be seen among our Mining Correspondence. The usual accounts were passed, showing a balance in favour of the company. In consequence of the important intelligence from the mines, the committee were authorised to increase the monthly cost to 160*l.*, and for that purpose they were empowered to issue the remaining shares, giving the preference to the adventurers; and also, if necessary, to make a call.

At the Mineral Court meeting, a call of 4*l.* per share was made, to meet the loss caused by the erection of machinery, and apparatus for dressing

the tin. The reports of Capt. Evans, who had just inspected the mine, and of the agent, are, however, satisfactory with regard to the prospects.

By the report presented at the East Wheal Leisure meeting, it appears that the expense of the works, including the purchase of engine and machinery, since the commencement of the operations in June last, is less than 1000*l.* A call of 1*l.* per share, to provide for future working, is to be forthwith made.

The Heignston Down Consols meeting showed a balance in hand of 432*l.* 10s. 9d. The amount received from calls, loan of 100*l.*, and sale of ores, was 1478*l.* 3s. 11d.—Cost of mines for three months ending in Sept., repayment of loan, and dues, 1045*l.* 13s. 2d.—The report of the agent states that 25 tons of ore and 1½ ton of tin were sampled the preceding Friday. The 45 had been extended more than 9 fms. since last meeting.

At the Wheal Langmaid meeting, the accounts showed—Balance in favour of company, 53*l.* 3s. 1d.; arrears of calls, 61*l.* 3s. 6d. = 114*l.* 6s. 7d. —Another meeting is to be held near the mine in about a month, to determine as to future working, and what machinery shall be applied. The inspecting agents recommended continuing the 15 fm. level north on the flookan lode, which is rather kindly, and having in it some strings of lead ore on the south part of the lode.

The Runnaford Coombe meeting showed a balance in favour of the adventurers of 18*l.* 16s. 6d. The sales of tin had reached 1259*l.* 8s. 7d.; received on calls, 3894*l.* 6s.; mine cost, 5058*l.* 19s. The accounts had been formally examined and audited, and the affairs of the company were considered by the meeting to be placed on a satisfactory footing.

A further adjournment of Camborne Consols took place, it being understood, however, that the shareholders would be speedily urged to consider the steps most expedient to be taken.

Shares in the following mines have changed hands since our last:—St. Aubyn and Grylls, Bedford United, East Tamar, South Tamar, East Buller, South Basset, Devon Great Consols, Alfred Consols, Gustavus, South Caradon, Penzance Consols, East Sharp Tor, Pentire Glaze, Heignston Downs, Bawden, Spearne Consols, and Treviskey and Barrier.

In Foreign Mines there have been transactions in Santiago, United Mexican, St. John del Rey, and Australian; but the amount of business has not been considerable, nor have the quotations materially varied.

The Royal Santiago Company have received advices, dated Cobre, September 16, in which it is stated, as will be seen elsewhere, that the efforts made to develope Thompson's shaft had not been so successful as was expected. The lode is from 7 to 8 ft. wide, producing 5 tons of ore per fm. East from shaft the lode is 6 ft. to 7 ft. wide, yielding 6 tons per fathom. The stopes between the 8 fathom and 10 fathom levels are the same as previously reported, with the same quantity of ore. The stratum in the crosscut south, in the adit level, is stated to be disordered, the water flowing freely from the middle part of the level, as before. In Taylor's shaft there is no alteration, nor are any changes of importancein other portions of the mine mentioned in the report.

The report from the Linares Mines, dated Oct. 19, confirms the improvement in the general prospects of the mine, previously described. A large piece of lode standing west, of excellent quality, about 5 fms. long, is reported, and the operations for draining were progressing. The water had prevented any further examination eastward of La Manca; but it was expected that a full report on the mine under the 45 would be able to be given next week. The tribute pitches continue productive, but less ore was expected to be raised this month, on account of the delay in resuming Wilson's shaft. The ore in stock at Linares on the 12th October was 124 tons 2 cwts.; weighed in, Oct. 19, 11 tons 17 cwts.; sent for shipment, 14 tons 16 cwts.—leaving at Linares 121 tons 3 cwts.; at Seville, 60 tons 3 cwts.; at Malaga, 101 tons: total in Spain, 282 tons 6 cwts.; on board ship, 121 tons 5 cwts., making the total of ore in stock, 403 tons 11 cwts. For further details we refer to the report, which is given elsewhere.

At a meeting of the board of directors of the United Mexican Mining Association, held yesterday, it was determined that if the next advices (expected early in the ensuing week) should prove equally favourable with the last, a dividend should be immediately declared, without waiting until January next, as was contemplated.

A private meeting of the governor and directors of the Company of Copers Miner in England will be held on Wednesday, the 6th inst., in order to adopt such arrangement as will lead to a final and satisfactory agreement with the Bank of England.

At the Galvanised Iron Company's meeting, the steps taken by the directors, which were detailed at length in their report, for effecting an arrangement of the affairs of the company, were ratified and approved. The meeting was held under the Dissolution Act, in 1848. Further steps are in progress for a settlement of the claims and liabilities of the company.

The mining news of the week from Wales is very satisfactory.

East Daren (improperly so called, because there are between it and Daren two other mines, not under the same company; its proper name is Gwaith-du) is in a great course of ore. The engine went to work last week, and the water is out by this time.

At Bwlch Consols, the 45 fm. level west is worth 45*l.* per fm. Level Newydd is in good ore.

At Cefn Cwm Brwyno, the engine shaft and western end (the 20) have passed into famous ore.

Allt-y-Crib steadily increases in value. The western end holds with undiminished goodness, and the length of the course of ore is as yet quite unknown. The pit and wheel are ready, waiting only for some castings from Aberystwith.

A copper mine at Treddol, discovered within the last few years, is just put on by a new company. They are stoping and rising, with some ore.

At Havan they are driving east in the soft ground, with four or six men, meaning probably to cross-cut into the lode when they want ore, which is not considered by everybody to be a good plan of operations.

At Lletten-hen, the engine-shaft is sunk about 17 fms. from the surface, and is at the bottom in a good dry lode.

Bromfloyde, an old mine newly put on, is yielding good ore from the ends of the Parson's adit. This mine was worked by Bushel, about 1630, as appears from a *General View of South Wales*, published in 1815. It is there said that "Cwmsymlog being considered as drained of its treasures, Mr. Bushel turned his attention to the five mines of Daren, Talybont, *Broomefloyde*, Goginan, and Cwm-ervin." It is curious to observe here that Cwmsymlog was thought to have been exhausted more than 200 years ago, and it is equally curious to know that more than one very large fortune has been made therein since.

At Cefn Bruno, the lode in the whim-shaft is 4 ft. wide, now yielding 2 tons of ore per fm. The lode in the adit west has not been taken down since last report. The lode is expected to be cut by the deep cross-cut in about six or eight weeks.

At Cwmystwith, the lode in the 30 west looks strong, with a great deal of mundic, and some ore. The 36 east continues in good ore. The 30 east is poor, but in a strong lode, with much water. Taylor's level is set to drive east on the great coppery lode, in which something like the north wall has been met with, but no ore. The stopes continue to look well.

At Nanteos, the lode in the 30 fm. level is 5 ft. wide, yielding 15 cwts. of ore per fm. In the winze below the 20 it is 4 ft. wide, yielding 1 ton per fathom. The 20 east, 12 cwts. per fm. The lode in the 40, east of Taylor's shaft, is very large, with spots of ore.

At Gwaithgoch the lode is 9 ft. wide, yielding 12 cwts. of ore per fm. The month's sampling will be 40 tons.

To the list of mines in the Cardiganshire district, given in the Journal a fortnight since, are to be added Tynfron, Cwmshop, Poole's Llywernog, Cerrig-yr-wyn, Twll-y-mwyn, and West Goginan, of which two only are leased—viz., the first to Mr. Taylor, and the last to Mr. Hitchins, where active trials for ore are being carried on. The total number thus appears to be seventy-nine.

The imports of ores and metals at London in the week ending 24th of October were—

1400 plates of zinc from Hamburgh	1512 ingots of copper from Sydney
2479 ditto ditto from Stettin	81 bars iron from Antwerp
7488 ditto ditto from Antwerp	341 ditto from Schien
51 barrels ditto from Ghent	1654 ditto from Rotterdam
28 bags copper ore and regulas from Valparaiso	150 bags antimony from Bilboa
	99200 lbs. quicksilver from Seville

The imports of ores and metals at Liverpool in the fortnight ending 28th of October were—

70 casks of zinc from Ostend	77 bundles steel from Quebec
8107 sheets ditto from ditto	19 casks scrap steel from New York
614 plates ditto from Stettin	222 bars iron from St. Petersburgh
437 bars copper from Islay	100 tons lead from Cartagena
99 bags copper ore from ditto	3231 bars ditto from ditto
435 barrels nails from Antwerp	

HULL, THURSDAY.—Messrs. T. W. Flint and Co. state that mining shares have been a degree less active, but prices have, with one or two exceptions, been pretty well maintained. St. Aubyns are flatter, and so are Wellingtons; Gustavus, on the other hand, have improved—5*l.* refused.; West Tolgus, South Tamars, and Alfreds, in fair request, as are also Tremaynes.—Railway shares are not so good, owing to the arrangement of the accounts. Many holders who were fortunate enough to come in before the late rise have realised, instead of paying for, their stock; added to which, the *bears* are rather taking heart, and operating to a small extent. We do not, however, look for a serious decline in prices.

LEAD ORES.

TICKETINGS FOR ABOUT 100 TONS FOXDALE LEAD ORE.

Douglas, Isle of Man, October 26.

Bidders.	*Price per Ton.*
Newton, Keates, and Co.—Bagillt (purchasers)	£11 14 6
J. H. Meredith (trustee of late J. T. Treffry)—Fowey Consols	9 10 6
Combmartin Smelting Company—Barnstaple	9 4 6
Tamar Smelting Company—Beeralston	9 17 6
Sims, Willyams, Nevill, and Co.—Llanelly	10 13 6
Walker, Parker, and Co.—Dee Bank	11 11 0
Mather and Co.—Bagillt	11 12 0
Pontifex and Wood—Newcastle	10 6 0
Locke, Blackett, and Co.—Newcastle	10 2 6

Sold in London.

Mines.	*Tons.*	*Prices per Ton.*	*Purchasers.*
Keswick	6¼	£10 5 0	Locke, Blackett, & Co.
ditto	13¾	11 0 0	ditto
South Tamar	90	14 0 0	Walker, Parker, & Co.
Callington	30	16 10 0	Locke & Co.
Sold at the Mine.			
Tregorden	5	£25 10 6	Tamar Company.
Bwlch Consols	45	14 18 6	Newton, Keates, & Co.
East Wheal Rose	60	14 11 6	Michell & Co.
ditto	44	14 12 0	ditto
ditto	36	13 1 6	Sims & Co.

COPPER ORES

Sampled October 9, and Sold at Swansea, October 29, 1850.

Mines.	Tons.	Prod.	Price.	Mines.	Tons.	Prod.	Price.
Cobre	89	16¾	£12 2 6	Cobre	20	18½	£13 8 6
ditto	56	16¼	12 0 6	Cuba	92	11½	8 4 0
ditto	47	23¼	17 19 6	ditto	86	11½	8 8 0
ditto	42	19	14 5 0	ditto	76	11½	8 10 6
ditto	29	23½	17 14 6	ditto	75	11½	8 5 6
ditto	24	19	14 13 6	ditto	62	25½	19 0 6
ditto	100	17	12 9 0	ditto	61	23½	17 17 6
ditto	88	16¾	12 2 6	ditto	34	18	13 15 0
ditto	60	24½	18 2 0	ditto	10	28½	22 0 6
ditto	52	24¾	18 6 0	Knockmahon	96	7½	5 13 6
ditto	76	15½	11 2 6	ditto	80	8¾	7 2 0
ditto	51	21¾	16 10 6	ditto	79	8	5 19 0
ditto	10	17½	12 17 0	Kapunda	16	42½	33 0 6
ditto	46	20	15 1 6	Ballynoe	8	14¼	11 6 0

TOTAL PRODUCE.

Cobre	790	£11190	8 0	Knockmahon	255	£1582	17 0
Cuba	496	5703	0 0	Kapunda	16	528	8 0
				Ballynoe	8	£90	8 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
English Copper Company	205¼	£3153 12 9
Grenfell and Sons	230	3376 11 0
Sims, Willyams, and Co.	60	1086 0 0
Vivian and Sons	173¾	1547 6 6
Williams, Foster, and Co.	644¼	5957 13 0
Schneider and Co.	30¾	545 3 9
British and Foreign Copper Company	92¾	1724 14 9
Mines Royal	128¼	1703 19 3
Total	1565	£19,095 1 0

Copper Ores for Sale Nov. 19.—Bearhaven 439—Chili 421—Cobre 400—Knockmahon 254—Burra Burra 139—Kaw-aw 126—Spanish 74—Waterloo Slag 70—Kapunda 31—Ballynoe 25—Vine Slag 19—Sand Ore 10—Australian 8—London Slag 4—Ballymurtagh 3—Lydney 2.—Total, 2025 tons (21 cwts.)

AVERAGES.

	Produce.	Price.	Standard.
British	8¾	£ 6 7 0	£102 0 6
Foreign	17¾	13 7 6	87 13 0
Sale	16½	£12 4 0	£88 6 6

Totals—British, 263; Foreign, 1302 = 1565 tons (21 cwts.)

AVERAGES OF LAST SALE.

	Produce.	Price.	Standard.
British	9¼	£ 7 0 2	£96 14 0
Foreign	18¾	13 12 5	86 12 6
Sale	14¾	£10 18 0	£89 7 0

Totals—British 674; Foreign, 968 = 1642 tons (21 cwts.)

COPPER ORES

Sampled Oct. 16, and Sold at Andrew's Hotel, Redruth, October 31.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
North Roskear	102	£6 12 6	Consolidated	84	£4 12 0
ditto	96	5 13 0	ditto	79	5 10 6
ditto	85	9 15 6	ditto	76	5 19 6
ditto	79	5 14 0	ditto	70	5 3 0
ditto	60	1 17 6	ditto	67	4 11 6
ditto	56	7 11 0	Wheal Seton	86	4 6 0
ditto	45	7 2 6	ditto	69	6 3 0
ditto	43	7 13 6	ditto	68	4 16 0
ditto	39	6 2 6	ditto	65	2 7 6
ditto	35	1 12 0	ditto	63	4 12 6
Tincroft	115	2 12 6	ditto	61	6 5 0
ditto	75	1 16 0	ditto	32	2 15 0
ditto	63	3 16 6	Wheal Basset	96	3 10 0
ditto	59	4 2 6	ditto	90	6 2 6
ditto	57	4 1 6	ditto	81	3 12 0
ditto	56	5 4 6	ditto	59	17 9 0
ditto	48	4 8 0	South Wh. Frances	88	7 2 0
ditto	47	4 13 0	ditto	66	5 8 0
ditto	41	6 18 0	ditto	44	9 10 0
ditto	40	2 3 0	ditto	43	9 9 0
ditto	27	9 1 0	ditto	15	5 2 6
North Pool	100	3 19 0	Fowey Consols	81	6 12 6
ditto	94	3 19 0	ditto	72	6 11 6
ditto	86	2 10 6	ditto	70	7 7 0
ditto	80	3 11 6	Wh. Vyvyan	13	2 10 6
ditto	69	2 14 6	ditto	12	7 12 6
ditto	49	3 3 6	Treffry's regulus	10	11 5 6
ditto	41	2 8 0	East Seton and Wh. Maud	7	6 3 6
Consolidated	110	5 17 0			

TOTAL PRODUCE.

North Roskear	640	£3980	3 0	South Wh. Frances	256	£1882	8 6
Tincroft	628	2489	2 0	Fowey Consols	223	1524	10 6
North Pool	519	1711	9 0	Wh. Vyvyan	25	124	6 6
Consolidated	486	2587	10 0	Treffry's regulus	10	112	15 0
Wh. Seton	444	2035	11 0	East Seton and Wh. Maud	7	43	4 6
Wh. Basset	326	2208	8 0				

Average Standard ..... £105 18 0 | Average Produce 7¾

Average Price per ton £5 4 6

Quantity of Ore ..... 3564 tons | Quantity of Fine Copper, 269 tons 2 cwts.

Amount of Money £18,699 8 0

LAST SALE.—Average Standard ..... £105 9 0.—Average Produce 7

Standard of corresponding sale last month, 105*l.* 8s.—Produce, 7¼.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	219	£1119 4 11
Vivian and Sons	605	2685 8 2
Freeman and Co.	371	2045 15 9
Greenfell and Sons	719	4209 13 2
Sims, Willyams, and Co.	466	2441 0 8
Williams, Foster, and Co.	821	4512 2 6
Schneider and Co.	363	1686 2 10
Total tons	3564	£18,699 8 0

Copper ores for sale on Thursday next, at Andrew's Hotel, Redruth.—Mines and Parcels.—Carn Brea 734—Tywarnhayle 437—Wheal Buller 314—Alfred Consols 261—Levant 251—Par Consols 250—Wheal Tremayne 160—Wheal Agar 44—Cook's Kitchen 29—Boscaswell Downs 13—Polgooth 12—Trelyon Consols 12—Boswidden 11—Boscundle 10—Wheal Tehidy 10—East Wheal Treasury 10—Providence Mines 7.—Total, 2565 tons.

NO SALE on Thursday week, November 14.

MINING APPOINTMENTS DURING THE WEEK.

1. Pay day at Carnbrea, South Basset, East Pool, Tincroft, South Tolgus & Wh. Ellen.
2. Pay and setting at Wheal Mary, West Jewel, Stray Park, Dolcoath, Devon Consols, and Perran St. George.
4. South Frances account on the mine. Fowey Consols sampling.
6. Devon Consols, and other mines sampling.
7. Ticketing at Redruth. Carnbrea and other mines.
8. North Pool setting. Pay at West Caradon and Gonamena.
9. Par Consols pay. Pay and set West Treasury. East Crofty pay and Phœnix.

PRICES OF MINING SHARES.

*** As it is exceedingly difficult to obtain a correct knowledge of all the mines in our list in London, we trust the agents, and others interested, will assist us, by forwarding any corrections with which they may be acquainted—our object being to present as perfect a list as can be procured.

BRITISH MINES.

Shares.	Company	Paid.	Price.
1000	Abergwessin (silver-lead), South Wales	9	—
1024	Alfred Consols (copper), Hayle, Cornwall	8¼	66 70
1248	Allt-y-Crib (silver-lead), Talybont, Cardiganshire	5	6¼
1624	Balleswidden (tin), St. Just, Cornwall	9	10 10½
128	Balnoon Consols (tin), Uny Lelant, Cornwall	48	50
905	Barristown (lead), Carrick, Ireland	5¼	—
3650	Bawden (silver-lead), Cornwall	7s	¾ ¾
4000	Bedford United (copper), Tavistock, Devon	2½	5¼ 5½
1280	Birch Tor and Vitifer (tin), Dartmoor, Devon	10½	4
1500	Bishopstone (silver-lead), South Wales	1½	10
5000	Black Craig (lead), Kirkcudbrightshire	5	5
8000	Blaenavon (iron), South Wales	50	12½
1024	Bodmin Consols (lead), Wadebridge, Cornwall	3	3
5000	Bodmin Moor Consols (tin and copper), Bodmin, Cornwall	1	3
40	Bolowall and Nanpean (tin), St. Just, Cornwall	—	16
128	Boscean (tin), St. Just, Cornwall	10	10
60	Bosorn (tin), St. Just, Cornwall	5¼	6
100	Botallack (tin and copper), St. Just, Cornwall	182	240 250
1500	Bridford Wheal Augusta (lead), Bridford, Devon	¼	—
10000	British Iron, New, regis. (iron), South Wales	12	8
—	Ditto ditto, scrip	10	10
2400	Bryn-Adrian (lead), Cardiganshire	2	2 2½
107	Budnick Consols (tin), Perranzabuloe, Cornwall	52½	10 11½
406	Butterdon (lead), Menheniott, Cornwall	1½	6
2000	Bwlch Consols (silver-lead), Cardiganshire	—	4¼
1000	Callington (lead and copper), Callington, Cornwall	26	6¼
1000	Camborne Consols (copper), Camborne, Cornwall	7	7 8
20000	Cameron's Steam Coal (coal), Swansea, Wales	7	—
1168	Caradon Great Cons. Mines (copper), Linkinhorne, Corn.	7	3
256	Caradon United (tin and copper), St. Cleer, Cornwall	24	5 8
1536	Caradon Vale (copper and lead), St. Ive, Cornwall	1½	1½ 1¾
1000	Carbona (tin and copper), Crowan, near Camborne	5	10
1000	Carn Brea (copper and tin), Illogan, Cornwall	15	117½ 125
3000	Carthew Consols (cop. & lead), near Wadebridge, Cornwall	3¼	4
132	Carvannall (copper), Gwennap, Cornwall	21¾	60 80
200	Cefn Bruno (lead), Cardiganshire	6	11
113	Charlestown (tin and copper), St. Austell, Cornwall	220	—
500	Comblawn (lead), Callington, Cornwall	5¾	4¾
128	Comfort (copper), Gwennap, Cornwall	45	110
256	Condurrow (copper and tin), Camborne, Cornwall	20	110 115
2560	Cook's Kitchen (copper and tin), Illogan, Cornwall	14	5
1000	Coombe Valley Quarry (slate), St. Ginnis, Cornwall	5	2
1000	Copper Bottom (copper), Crowan, Cornwall	5	7
900	Court Grange (silver-lead), Cardiganshire	10	10
211	Craddock Moor (copper), St. Cleer, Cornwall	27	8
1600	Craig-y-Mwyn (lead), Llanrhiadr, Montgomeryshire	4	8
256	Crane and Bejawsa (copper), Camborne	2	10
1000	Cwm Erfin (lead), Cardiganshire	4	4 4½
128	Cwmystwith (lead), Cardiganshire	60	90
1000	Daren (silver-lead), Cardiganshire	2	8 8½
7100	Derwent (silver-lead), Durham	10	3
1040	Devon and Courtenay Consols (copper), near Tavistock	11½	1¾
1024	Devon Great Consols (copper), near Tavistock	1	225 230
1000	Dhurode (copper), Ireland	2	5
182	Dolcoath (copper and tin), Camborne	30	20
2560	Drake Walls (tin and copper), Calstock, Cornwall	6¼	2¼ 3
10000	Durham County Coal (coal), Durham	45	9
3000	Dyfngwm (lead), North Wales	10	3 3¼
1024	East Balleswidden (tin), Sancreed, Cornwall	¼	1
2500	East Birch Tor (tin), North Bovey, near Ashburton	3	3
1024	East Buller (copper), near Redruth, Cornwall	2	5¼ 6
128	East Carn Brea (copper), Redruth, Cornwall	1	3
2048	East Crowndale (tin), Tavistock	7¼	1½
150	East Daren (lead), Cardiganshire	14	50
256	East Godolphin (copper), Crowan, Cornwall	13¼	13
4000	East Gunnis Lake Junction (copper), Gunnis Lake	¼	⅛ ⅛
1024	East Polgooth (tin), Cornwall	6	7¼
128	East Pool (tin and copper), Pool, Illogan, Cornwall	15	76
256	East Seton and Wheal Maude, near Redruth, Cornwall	—	4½
1024	East Sharp Tor (copper), Devon	—	8
9000	East Tamar Consols (silver-lead), Beer Ferris, Devon	1½	1½ 1⅝
256	East Tolgus (copper), Redruth, Cornwall	1¼	8
1000	East Trescoll (tin), Lanivet, near Bodmin, Cornwall	1	2 2½
128	East Tywarnhayle (copper), St. Agnes, Cornwall	1	7
94	East Wheal Crofty (copper), Illogan, Cornwall	125	110 120
256	East Wheal Frances, Illogan	1½	3¼
1000	East Wheal Reeth	⅛	1
512	East Wheal Leisure (copper), Perranzabuloe	2	6
128	East Wheal Rose (silver-lead), Newlyn, Cornwall	50	500 525
1280	Esgair Llee (lead), Llanfihangel-y-Croythin, Cardigan	2	3 3½
248	Exmoor Wheal Eliza (copper), South Molton, Devon	11	10
494	Fowey Consols (copper), Tywardreath, Cornwall	40	30
1024	Froidd Llwydd Mines (lead), Wales	1¼	3½
256	Garras (lead), near Truro	41	23
4000	General Mining Company for Ireland (copper), Ireland	1¼	4
100	Goginan (lead), Cardiganshire	5	200
256	Gonamena (copper), St. Cleer, Cornwall	44¼	16
256	Grambler and St. Aubyn (copper), Redruth, Cornwall	80	28 30
96	Great Consols (copper), Gwennap, Cornwall	1000	250
512	Great Wheal Baddern (tin and silver-lead), Kea, Cornwall	20	100
1024	Great Sheba Consols (tin and copper), Stoke Climsland	2	4 4¼
3072	Great Wheal Mitchell Consolidated, Lanivet	—	5
512	Gt. Wh. Rough Tor Consols (copper), near Camelford	29	20
6000	Growa Slate Company, Camelford, Cornwall	5	5
1026	Gustavus Mines (copper), Camborne	3	5
512	Hawke's Point (copper), Uny Lelant, Cornwall	5	—
1024	Hawkmoor (copper), Calstock, Gunnis Lake	5	17
6000	Heignston Down Consols (copper), Calstock, Cornwall	2¼	3 3¼
1500	Hennock (silver-lead), Hennock, near Exeter, Devon	26s	2 2¼
512	Herodsfoot (lead), near Liskeard	16	13¼ 14
10000	Hibernian (copper), Ireland	12¼	1⅞
1000	Holmbush (lead and copper), Callington	23	18 20
1900	Keswick (lead), Portinscale, near Keswick	11	2 3
1024	Kingsett & Bedford (lead & copper), St. Mary Tavy, Devon	3¾	3
787	Kirkcudbrightshire (lead), Kirkcudbrightshire, Scotland	8¼	5¼ 5½
2048	Lamberooe Wheal Maria (copper and tin), Lamerton	11	5
252	Lanarth Consols (copper), Gwennap, Cornwall	—	9
256	Lelant Consols (tin), Uny Lelant, Cornwall	53	25
160	Levant (copper and tin), St. Just, Cornwall	—	175
1000	Lewis (tin and copper), St. Erth, Cornwall	17	15 16
100	Lisburne (lead), Cardiganshire	75	600
1000	Llwynmaiees (lead), Cardiganshire	9¼	9 10
3600	Llynvi Iron (iron), North Wales	50	50
6000	Marke Valley (copper), Caradon, Cornwall	10	⅛ 1
5000	Mendip Hills (lead), near Bristol	3¾	1½ 1¾
128	Metha (lead) Newlyn, Cornwall	34	—
256	Mill Pool (tin and copper), St. Hilary and Germoes, Corn.	1¼	8¼
256	Mineral Court (tin), St. Stephens, near St. Austell	13¼	16
20000	Mining Co. of Ireland (copper, &c.), Waterford, Ireland	7	5¼
1024	Moditonham & Marrabro' (copper & lead), Botes-fleming	1¼	2¼ 3
1024	Montgomery (lead and copper), Montgomeryshire	6	11¼ 12
200	Nanteos (lead), Cardiganshire	34	—
3000	Nant-y-Car (copper), near Rhayader, Breconshire	—	5 5¼
1024	New East Crowndale (copper and tin), Tavistock	2	2
6000	North Wheal Basset (copper and tin), Illogan, Cornwall	—	15 20
1024	North Buller (copper), Redruth, Cornwall	3	6 7
1200	North Wheal Buller (copper), Redruth Cornwall	5	7
2000	North Levant (tin and copper), St. Just, Cornwall	—	3
100	North Pool (copper and tin), Pool, Cornwall	45	400
140	North Roskear (copper), Camborne, Cornwall	5¼	160
256	North Tolgus (copper), Redruth, Cornwall	2¼	2¼
262	North Wheal Leisure, Perranzabuloe, Cornwall	1¼	1¾
512	North Wheal Vor (tin), Breage, near Helston, Cornwall	—	5
128	Par Consols (copper), St. Blazey, Cornwall	55¾	650
1026	Pendarves Consols (copper), Camborne, Cornwall	2	6¼
1000	Pendarves and St. Aubyn (copper), Camborne, Cornwall	4	5¼ 6
4934	Pennant and Craigwen (lead), Wales	3	3
2048	Pentire Glaze, United (silver-lead), St. Minver, Cornwall	5	8¼
1000	Pen-y-bank and Erglodd (lead), Cardiganshire	4	6
1160	Perran St. George (copper and tin), Perranzabuloe	21¼	8 10
1024	Penzance Consols (tin), Sancreed, Cornwall	22s 3d	2¾
1000	Peter Tavy and Mary Tavy (copper), Tavistock, Devon	2¼	5½ 6
512	Plymouth Wheal Yeoland (tin), Plymouth, Devonshire	6¼	6
1000	Ditto Preferential	15	—
1000	Polberrow (tin), St. Agnes, Cornwall	⅛	—
112	Providence Mines (tin), Uny Lelant, Cornwall	—	150
2500	Rhoswydol and Bacheiddon (lead), North Wales	10	10
10000	Rhymney Iron (iron), Rhymney, South Wales	80	12
10000	Ditto New	7	3
5000	Roche Rock (tin), Roche, near St. Austell	1	1
5000	Rocks Mine (tin), Roche, near St. Austell	5	6 7
2048	Runnaford Coombe (tin), Devon	2¼	2¼ 3
2048	Snowdon (copper), Carnarvonshire, Wales	3	5
128	South Caradon (copper), St. Cleer, Cornwall	5	205
2000	South Carn Brea (copper), Illogan, Cornwall	10	10 12
1100	South Dolcoath (copper), Illogan, Cornwall	6	3 4
256	South Friendship Wheal Ann (copper & tin), Devonshire	30	28 30
256	South Molton (lead), Devonshire	12¼	12¼
1024	South Plain Wood (copper), Ashburton, Devon	2¼	6 7
800	South Speed (copper and tin), Uny Lelant, Cornwall	15	30
9000	South Tamar (silver-lead), Beer Ferris, Devon	1	2¼ 2¾
256	South Tolgus (copper), Redruth Cornwall	16	165 170
256	South Trelawny (lead), near Liskeard, Cornwall	31	5 8
2000	South Wales Mining Company (lead), South Wales	1	1
256	South Wheal Basset (copper), Illogan, Cornwall	10¼	310 320
124	South Wheal Frances (copper), Illogan, Cornwall	160	560
256	South Wheal Josiah (copper), Calstock, Cornwall	2	3¼ 4
10000	Southern and Western, Irish (copper), Cork, Ireland	2¼	4
280	Spearne Moor (copper), St. Just, Cornwall	30	40
128	Spearne Consols (tin), St. Just, Cornwall	10	75 80
256	St. Aubyn and Grylls (copper and tin), Breage, Corn.	2¼	19 21

BRITISH MINES—*Continued.*

Shares.	Company.	Paid.	Price.
94	St. Ives Consols (tin), St. Ive's, Cornwall	—	80
128	St. Michael Penkivel (cop. & tin), Chacewater, Cornwall	5	10½
990	St. Minver Consols (silver-lead), Cornwall	1	6
1000	Stray Park (copper), Camborne, Cornwall	10½	22 23 23½
9600	Tamar Consols (silver-lead), Beeralston, Devon	4	2½ 2¾
687	Tavy Consols (copper), near Tavistock	8	3½ 3¾
6000	Tincroft (copper and tin), near Pool, Cornwall	7	13
128	Tokenbury (copper), St. Ive, near Liskeard	7½	8
240	Tolcarne (tin and copper), Camborne, Cornwall	8	12½
1024	Tramack United Mines (tin and copper), Helston, Corn.	¼	6¼ 7¼
2048	Trabell Consols (tin and copper), Llanivet, near Bodmin	1¼	2½
512	Treburget United (lead), St. Teath, Cornwall	—	—
5000	Tregear Consols (antimony and silver-lead), St. Kew	1	2 2½
256	Tregorden (silver-lead) Wadebridge, Cornwall	10	6¼
256	Trehane (silver-lead), Menheniot	1	16 18
5000	Treleigh Consols (copper), Redruth	6	3 3½
1024	Trelusback, Stithians, Cornwall	—	5
150	Trelyon Consols (tin), St. Ive's, Cornwall	7½	20
2000	Trenance (copper), Helston, Cornwall	6	7 8½
1500	Trenault (lime quarries)	2½	3½ 4
96	Treseavean (copper), Gwennap	10	130
120	Trethellan (copper), Gwennap	5	20 25
120	Treviskey and Barrier (copper), Gwennap, near Redruth	130	245
512	Trethevy (copper), St. Cleer, Cornwall	5½	5
512	Treville (lead), Lewanick	1½	6 7
1000	Tyllwyd (lead), Cardiganshire	2	2½
500	Tywarnhayle (copper), Illogan and St. Agnes	50	42½
200	United Mines (copper), Gwennap	50	140
5000	Warleggan Consols (copper), Cornwall	¼	1
1024	Wellington Mines (copper and tin), Perranuthnoe, Corn.	6¼	15 16
128	West Buller (copper), Redruth, Cornwall	10	690
256	West Caradon (copper), Liskeard	20	93 96
512	West Foway Consols (tin and copper), St. Blazey	40	60
2048	West Goginan (silver-lead), Cardiganshire	1½	2 3
1024	West Par Consols (copper), St. Blazey, Cornwall	5	—
2500	West Polgooth (tin), St. Ewe and St. Mewan, Cornwall	5	7
512	West Providence (tin), St. Erth, Cornwall	10	25
200	West Seton (copper), Camborne, Cornwall	45	175
940	West Tolgus and Treloweth (copper), Illogan, Cornwall	12½	7 7½
120	West Trethellan (copper), Gwennap, Cornwall	5	20
512	West Wheal Frances (copper), Illogan, Cornwall	1½	14½
1024	West Wheal Friendship (copper), Devon	3	3 4
3845	West Wheal Jewel (tin and copper), St. Day, Cornwall	12	2½ 3
2048	West Wheal Rose (lead), Cornwall	2	3
500	West Wheal Towan (copper), Illogan, Cornwall	7	11 12
1024	West Wheal Treasury (copper), Gwinear, Cornwall	11¼	8 9
1024	West Wheal Virgin (tin), Sancreed, Cornwall	¼	¼
5200	Wicklow (copper), Wicklow, Ireland	5	17½ 18
5000	Wicklow (copper and sulphur), Wicklow, Ireland	3	3½ 3¾
107	Wheal Adams (lead), Christow, Exeter	130	150
1000	Wheal Agar (copper), Illogan, Cornwall	—	5 6
256	Wheal Albert (copper), Cornwall	10	28 29
128	Wheal Ann (tin), near Helston, Cornwall	—	50¼
300	Wheal Arthur (lead), near East Wheal Rose, Cornwall	17	50
2048	Wheal Arthur, Calstock	2	2
3072	Wheal Augusta (tin), St. Just, Cornwall	¼	3
120	Wheal Bal (tin), St. Just, Cornwall	10	14
256	Wheal Benny (copper), Calstock, Cornwall	19¼	5
1024	Wheal Bray (copper), Alternum, Cornwall	11¼	—
232½	Wheal Calstock (copper), Calstock, Cornwall	9	10
256	Wheal Carpenter (tin and copper), Gwinear, Cornwall	—	5¼
268	Wheal Courtenay (copper), Cornwall	20	23
1024	Wheal Crebor (copper), Tavistock, Devon	1¾	2¼ 3
500	Wheal Daniell (copper), Chacewater	5	—
182	Wheal Elizabeth (copper), Redruth, Cornwall	9	52½
1024	Wheal Emily (lead and antimony), near Plymouth	3	5½ 6¼
1024	Wheal Fortescne (copper), near Tavistock, Devon	4¼	1 1¼
764	Wheal Franco (copper), near Tavistock, Devon	27	7
100	Wheal Friendly (tin), St. Agnes, Cornwall	70	65
128	Wheal Friendship (copper), Devon	—	120
4000	Wheal Golden (lead), Peranzabuloe, Cornwall	2	5 6
1000	Wheal-an-Grose (tin), St. Columb Major, Cornwall	5	5 6
2560	Wheal Harriet (copper), Camborne, Cornwall	—	2 2½
1024	Wheal Hamlyn, near Oakhampton, Devon	¼	1 1¼
2048	Wheal Harris (lead), near Tavistock	¼	1¼ 2
100	Wheal Henry (copper), Kea, near Truro, Cornwall	—	40
256	Wheal Kingston (copper and silver-lead), Stoke Climsland	¼	1¼
6000	Wheal Langford (copper and silver-lead), Callington	¼	1¼ 2
2000	Wheal Langmaid (lead), Devon	¼	1¼
112	Wheal Margaret (tin), Uny Lelant, near Hayle	79	170 175
1024	Wheal May (silver-lead and copper), Botes-fleming	1¼	1¼
990	Wheal Mary (copper), Redruth, Cornwall	—	2¼
512	Wheal Mary Ann (lead), Menheniot	5	51 55
1024	Wheal Neptune (copper), Perranuthnoe, Cornwall	1	1¼
1080	Wheal Oak, near Helston, Cornwall	1¼	1¼
3000	Wheal Penhale (lead and copper), Cornwall	2	2¼
128	Wheal Plenty (copper), Redruth, Cornwall	13	38 39
128	Wheal Pollard (copper), St. Cleer, Cornwall	15¼	—
210	Wheal Prospect	4	7
5000	Wheal Providence, South Sydenham, Devon	2	2
120	Wheal Reeth (tin), St. Ive's, Cornwall	41	120
1024	Wheal Russell (copper), Tavistock	4	4 4¼
198	Wheal Seton (copper), Camborne, Cornwall	107	250
1056	Wheal Sarah (silver-lead), St. Kew, Cornwall	5	6
512	Wheal Sophia (silver-lead), Lezant, Cornwall	6¾	7
128	Wheal Squire (copper), St. Erth, Cornwall	—	5
1000	Wheal Susan, Breage and Crowan, Cornwall	¼	2
512	Wheal Trefusis (copper), Gwennap, Cornwall	4¼	5¼ 6
1100	Wheal Trescoll (tin), Lanivet, near Bodmin, Cornwall	6¾	6
520	Wheal Trelawny (silver-lead), near Liskeard, Cornwall	3¾	44 45
256	Wheal Tremaine, St. Ervan, Cornwall	9¾	2¾
1024	Wheal Tremayne (tin and copper), Gwinear, near Hayle	9¼	15¾ 16¼
267	Wheal Tryphena (tin and copper), Camborne, Cornwall	40	62½
126	Wheal Union (copper), Redruth, Cornwall	—	38 40
512	Wheal Venton (silver-lead), Liskeard, Cornwall	3½	4
1700	Wheal Vincent (tin), Alternum, Cornwall	5¼	7
128	Wheal Violet (tin and copper), St. Stephens, St. Austell	2	2
128	Wheal Vlow, Perranzabuloe	3	5
184	Wheal Vyvyan (copper and tin), Constantine, Cornwall	—	60

FOREIGN MINES.

5000	Alten Mining Company (copper), Norway	14½	1½	2
12000	Annotto Bay Mining Association, Jamaica	1	1½	
15000	Asturian Mining Company (coal, iron, &c.), Spain	15	1½	2
20000	Australian (copper), South Australia	4	3¼	
6000	Barossa Range (copper), South Australia	1½	¾	
10000	Brazilian Imperial (gold), Brazil	23	5	
12000	Cobre Copper Company (copper), Cuba	40	33	34
10000	Coquipo Mining Company (copper), Chili	14	4¾	5
20000	General Mining Association (iron & coal), Nova Scotia	20	13	14
5000	Kinzigthal Mining Association (silver), Germany	2	¾	
5000	Linares (lead), Spain	3	2	2¼
500	Ditto New	3	3	
5051	Mexican Company (silver), Mexico	59½	—	
20000	Mexican and South American (silver), Mexico	8	1	1½
5000	National Brazilian (gold), Brazil	30	3½	¾
100000	North British Australasian (copper), S. A. & New Zea.	1	¼	¼
7000	Royal Santiago (copper), Cuba	10	9½	10½
11000	St. John del Rey (gold), Brazil	15	14¾	
43174	United Mexican (silver), Mexico Av.	28½	7	
10000	Worthing (copper), Adelaide, South Australia	2	2	

CURRENT PRICE OF GOLD AND SILVER.

Foreign gold, in bars	per oz.	£3 17 9	New dollars	per oz.	£0 4 10½
„ Portugal pieces		0 0 0	Silver in bars (standard)		0 5 0¾

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Begbie's Hartley 14 6—Carr's Hartley 15 3 - Davison's West Hartley 15 3—East Adair's Main 12 6—Holywell 16—Original Windsor's Pontop 12 6—South Peareth 12 9—West Hartley 15 3—Wylam 14 6—Wall's-End Morrison 15 3—Bell 15 9—Belmont 15 9—Braddyll 16 3—Hetton 16 6—Haswell 16 9—Lambton 16—Russel's Hetton 16—Backhouse 15 3—Kelloe 16—Adelaide Tees 16—Richardson's Tees 14 3—Seymour Tees 15 6—South Durham 15 6—Tees 16 6—Birchgrove Graigola 19—Cowpen Hartley 15 3—Deep Vein Milford Stone 23—Derwentwater Hartley 14 9—Hartley 14 6—Sidney's Hartley 15 3.—Ships at market, 59; sold, 41.

WEDNESDAY.—Bate's West Hartley 14 9—Buddle's West Hartley 15—Begbie's Hartley 14—Carr's Hartley 14 9—Chester Main 14 6—Clavering's New Tanfield 13 3—Coxon's West Hartley 14 6—Davison's West Hartley 15—East Adair's Main 12 6—North Percy Hartley 14 9—Ravensworth West Hartley 14 9—Tanfield Moor 13—Walker Primrose 13—West Hartley 14 6—Wylam 14 9—Wall's-End Bewicke and Co. 15 3—Bell and Brown 15 3—Gosforth 15 3—Northumberland 14 9—Bell 15 9—Belmont 15 6—Braddyll 16 3—Hetton 16 6—Kepier Grange 15 9—Richmund 16—Russel's Hetton 16—Stewart's 16 6—Whitwell 15 3—Heselden 15—Kelloe 16 3—Thornley 16—Whitworth 14 6—Cleveland Tees 15 6—Maclean's Tees 14 9 to 15—Seymour Tees 15 6—Tees 16 6—Vernon Tees 15 3—Birchgrove Graigola 19—Cowpen Hartley 15—Crossfield Meathyr and Gadley's Steam 18 9—Deep Vein Milford Stone 23—Hartley 14—Sidney's Hartley 14 6.—Ships, 76; sold, 59.

FRIDAY.—Clavering's New Tanfield 13 3—Coxon's West Hartley 14—East Adair's Main 13—Heaton Hartley 13 9—Windsor's Pontop 12—Ravensworth's West Hartley 14 6—West Hartley 14 6—Wall's-End Acorn Close 15 6—Bell and Brown 15 6—Original Gibson 14 9—Walker 15—Bell 15 9—Braddyll 16—Hetton 16 6—Haswell 16 6—Lambton 16—Backhouse 15 3—Caradoc 16—Heugh Hall 15 6—Kelloe 16—Adelaide Tees 15 9—Birchgrove Graigola 19—Deep Vein Milford Stone 23—Derwentwater Hartley 14—Hartley 14—Newton Main 13—Nixon's Merthyr and Cardiff 21 6—Sidney's Hartley 14 9.—Ships at market, 43; sold, 33.

By late accounts we learn that the successful working of the copper mines on Lake Superior was attracting considerable attention. They promise most important results to the adventurers, and may prove of more real advantage to the United States than some of the more glittering discoveries in California. It is estimated that nearly 2,500,000 lbs. of rough copper will be brought down this year from the mines. This large production, and its probable further increase, may at no very distant period of time, taken in connection with the results obtained from the Australian mines, very seriously interfere with the sale of British copper in foreign markets.

THE MINING EXCHANGE OF LONDON.—

At a numerous MEETING of GENTLEMEN engaged in MINING, as Capitalists, Brokers, and Agents, held on the 1st inst., at the offices of Messrs. Coode, Browne, & Co., 10, King's Arms-yard, Moorgate-street,

It was resolved,—

That an institution be founded in the city of London, to be called the "MINING EXCHANGE OF LONDON."

That the objects of the institution shall be as follows:—

To furnish such a mart for mining property as its large importance demands.

For the accumulation of such statistics as to all mining property which either deserve or engage British skill and enterprise.

For the regulation of all transactions carried on within the institution, and for limiting these transactions to such as are strictly creditable and legitimate.

That a committee of seven persons be, and are hereby, appointed to inquire and report on the best means of carrying into effect the objects above stated, and that three be a quorum, and that they have power to add five to their number.

That the committee have power to avail themselves of the services of a secretary, to aid in the preparation of their report.

NOTICES TO CORRESPONDENTS.

*** We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

"S. and W." (Hull).—One of the chief benefits we anticipate from the proposed Mining Exchange is the publication of an authorised Share List. We use every endeavour to obtain accurate information, and we can only regret there should exist so much cause of complaint.

Perhaps "An Old Miner" can forward us a description of the mineral district of Okehampton? When we receive the report on Ivy Tor Mine, it shall appear among our Mining Correspondence: we have not heard of a company being formed for working the sett.

"T. W. F."—The Journal containing the particulars of "the Cost-book System—its Principles and Practice," has been long out of print: we intend re-publishing the paper, with additions, on an early opportunity.

"K. C. L."—There is no institution of the precise nature named in existence, but the formation of one, the Royal Panopticon of Science, has been long contemplated. Mr. Weale, of Holborn, has published a valuable series of rudimentary treatises, which may be called a scientific library, of which a catalogue and particulars can be readily procured on application.

"W. C." (City).—We decline inserting the letter. We cannot allow general charges of such a nature to obtain publicity through our columns. If there is any truth in the individual case referred to, a lawyer should be consulted as to the best means of obtaining redress.

IRON ORE.—We have a letter for "B. W." (Whitehaven), whose address has been mislaid.

"J. K." (Headington).—The Cost-book System requires that every shareholder's name should be entered in the cost-book of the company. The bye-laws for the government of the property are generally arranged by the body at the first general meeting, and the powers of the committee are in nearly every case fixed by the Deed of Settlement. Some portions of our correspondent's communication seem to be rather obscure, and we should wish to be informed of further details. On the Cost-book System, no amount can be determined as the value of a share, guaranteed from further liability, as calls are made when the exigency of the mine requires, and dividends *pro ratâ* are declared whenever their payment is warranted.

"L." (City).—We admit the truth of much of what is stated by our correspondent respecting the Share List generally, but not in the instances named. Each of the quotations were forwarded by respectable brokers, and we are assured they were accurate.

"J. W. C." (Gunnis Lake).—The letter is not adapted for publication: our readers would feel no interest in the dispute. Practical joking is generally very dangerous.

"S. M." (Callington).—As a general rule, all leases, or other interests in the land, created by a mortgagor subsequent to mortgage, are void as against the mortgagee, unless the mortgagee concurs. It is usual for the mortgagee to concur in leases granted by a mortgagor.

"A Shareholder" (Cornhill) can obtain the information on application to the secretary.

J. Martin (Liverpool).—The case of Toll *v.* Lee was tried on the 30th March, 1849, before Lord Denman, at the Bodmin Assizes; the motion for a new trial was argued in the Court of Exchequer before Barons Alderson, Parke, Rolfe, and Platt—the rule was refused. An account of the trial will be found in our Journal of the 30th June; and on the 21st of July we published legal form of notice and deeds of transfer.

ANGLO-CALIFORNIAN GOLD MINING AND DREDGING COMPANY.—We have received a communication from Cavendish Stuart Rumbold, Bart., in reference to the remarks in last week's Journal—the length of which, and the lateness of its arrival, prevents its appearance in this week's Journal.

*** It is particularly requested that all communications may be addressed—

TO THE EDITOR,

Mining Journal Office,

26, FLEET-STREET, LONDON.

And Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, NOVEMBER 2, 1850.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

The interest manifested on the subject of a MINING EXCHANGE continues unabated, as the various articles and communications in the daily journals abundantly show. Since our last publication further progress has been made in the establishment of a market for mining business, and the regulations and arrangements for its proper management may now be said to be definitively settled. We hail with much satisfaction these indications of a determination to supply a want, and remedy an evil, which has long been seriously felt and deplored. The body of gentlemen by whom the subject has been so energetically taken up very fairly embody, as we believe, the sentiments of the mining world; and considering the onerous nature of their task, they should have credit for honest purposes and intentions, in attempting to carry out a good design, until clear reason is seen for coming to a less favourable conclusion.

We adhere, upon mature reflection, to the opinion we expressed last week, that the Stock Exchange is not the proper focus for the carrying out of mining business. The peculiar features of mining property are opposed to its being made the subject of Stock Exchange speculation. The fluctuations so much commented on by some persons, and deemed by others positive proof of trickery and fraud, are in fact one of the essential elements of mining affairs. By the alteration in the productiveness of a lode, or some other unlooked-for event, the shares may for a time become comparatively valueless, although another change in the aspect may render it far more valuable. It appear to us unquestionable that the negotiation of property, subject to so many incidents and changes, is better left in the hands of those whose "speciality" it is, and who have given it the study and attention it imperatively requires. Until we are satisfied that the parties who are now engaged in establishing a Mining Exchange are unable, through internal bickerings and dissensions, to accomplish their object, we shall be most reluctant to fall back upon an application to the Stock Exchange, which, as far as the interests of mining brokers and agents are concerned, is about as suicidal as can be conceived; although such decision was arrived at, but which, we believe, will be admitted to have been determined, in the absence of the leading agents, or parties connected with the mining interests. But this is a result which need not occur. Only let the plan of a separate mining arena be carried out with judgment and vigour, and we cannot doubt of its obtaining the sanction and support of the great body immediately engaged in mining affairs, while that of the public will necessarily follow. The issue, in truth, is with the brokers themselves; and unless they desire to see themselves swamped, or deprived of their legitimate influence in mining matters, they will supersede the necessity for continued agitation on this subject, by the speedy formation of a "mining market" of their own.

We are not insensible, however, of the great influence that will probably be used to achieve the transfer of mining business to the Stock Exchange, nor are we surprised that the tone of the press should, for the most part, be favourable to it, seeing that the peculiarities and results of mining operations are usually overlooked in the discussion of this question. Our objection to such transfer is, that it will not meet the requirements of the case—that the effect will be to take mining negotiations out of the hands of those who are really conversant with them, and place them in the hands of men whose attention is devoted to other matters; and last, but not least, in importance, that the public, by the regulations of the Stock Exchange, would be excluded altogether, and so far be in a worse position than before. If the object is to obtain a better guarantee of the good faith of the brokers in their various reports and transactions—who have, by the way, been made to bear a load of unjust imputations, in order to bolster up the scheme of a transfer to the Stock Exchange—no good reason can be alleged why that should not be most satisfactorily effected in a new Mining Exchange, whose authorised list of quotations would, we have reason to believe, as faithfully record the business actually done as any that might be issued from Capel-court. The mining world is large enough and strong enough to transact its own business; and while frankly admitting the absolute necessity of an open market, we cannot help thinking that it would be an act of gross folly to permit the main direction of its affairs to pass into other hands.

Before lending too willing an ear to the representations of those who seek to make the Stock Exchange the sphere of mining transactions, it would be well to consider whether as much will be gained in absolute purity as is constantly assumed. We had imagined that the *locale* was not quite so much in the odour of sanctity as to encourage the belief of any extraordinary amount of integrity to be expected as regards the doings therein. No doubt the members of the Stock Exchange are belied when it is affirmed that the gambling spirit is the predominant one in that celebrated arena, and that jobbing of every shade and gradation forms the basis of its dealings. But if *not* belied in this particular, it behoves not only mining brokers and agents, but also that portion of the public who are interested in fair and straightforward conduct, to reflect before they arrive at the conclusion that the value of mining shares would be so much better ascertained on the Stock Exchange than elsewhere. That there would be an open market is true enough, but not quite conclusive of the question; for it would obviously be as liable to be influenced and disturbed by any under current of chicanery and intrigue. To say nothing of the fact that the public would be excluded from all participation in the matters referred to, it would be strange if, with the impression existing, justly or not, of the Stock Exchange, additional confidence and authority should be conferred on a peculiar class of transactions, offering of themselves too many temptations for a genius for jobbing.

Our counsel, if we may respectfully offer it, to those who are engaged in perfecting the contemplated arrangements, is to proceed steadily towards the completion of their plans, with the full assurance that the public generally, as well as the brokers and agents, will cordially respond to their summons, as soon as it is perceived that the right steps are taken to deserve it. Confidence in themselves is, perhaps, the most needful attribute just now, when, unless they prove equal to the occasion, they stand in danger of being unceremoniously set aside, and losing the influence and position they hold as legitimate agents of mining business. As watchful observers, they can hardly be indifferent to the hints thrown out by the *Globe* and other journals, that "a memorial would probably be favourably received" by the Stock Exchange Committee, which we think likely to be true enough. It is, however, for the committee of mining brokers to anticipate all other movements, and show that an open market can be attained, with such guarantees of integrity and just dealing as will remove the objections made against the private and exclusive system so justly complained of. The great purpose to be kept in view, is to introduce the element of publicity into mining negotiations; and whether this be effected through the agency of the brokers themselves, or by some other less direct medium, it is one to which the efforts of all should be devoted who are really anxious to promote the interests of the mining community.

Since writing the foregoing, a meeting of the members of the proposed institution was held at the offices of Messrs. COODE, BROWNE, and KINGDOM, King's Arms-yard, yesterday evening, when the rules and regulations under which the establishment was to be subjected were submitted and discussed, and which appear in our advertising columns. The meeting was well attended by parties interested in mining adventures, and the result gave general satisfaction.

Whatever may be the policy which has influenced the present administration of the ASTURIAN COMPANY in declining the discussion of the charges advanced by the liquidators, it is clear that the party attached to the latter are not disposed to shirk the question. Our correspondent, whose letter will be found in another column, has been as good as his word, and sent us a heap of documents as vouchers. It would have been desirable that such a mass of papers had reached us at an earlier period, when the leisure of the long vacation might have permitted a perusal, in the absence of more interesting matter; but even now we shall not evade the task of patiently examining a case where the questions to be considered are of great importance, as affecting principles involved in other cases, for which the proceedings here may form a precedent. We defer any discussion of the legal points; for we find that it is resolved to carry this case before the Court; and we may expect to hear of the result of the petition, which stands over from last Term, early next week, as Monday will be the petition-day for Sir K. BRUCE'S Court.

It is with pain we contemplate such an unfortunate issue to the proceedings of this ill-fated company. Without meaning to prejudge the case, we may say that, from what we have seen of the facts, it appears to be one of extreme culpability on the part of the promoters and directors; and that not in an isolated instance of misconduct, but perseveringly they appear in the same character throughout the whole of the piece. To cover fraud—we wish we could use a milder term—mismanagement, and incompetence, a succession of delusive statements and promises have been held out to the shareholders at each successive stage of the company's progress. The bulk of the proprietors must be the friends, or obsequious servants, of the directors, when they leave them their confidence one hour beyond the first announcement of misconduct—worse than many crimes for which hundreds are made outcasts from society. What is it to the shareholders whether Mr. B. is a merchant of high character, or an F.R.S., if that person, for the paltry bribe of a few hundred pounds, link himself with a nest of project-mongers to lure the unwary into a worthless scheme? Then, by a reckless and ignorant administration, they place the affair in such a position that the Spanish Government are so scandalised that they are coerced to strike down the company, without knowing a tythe of its enormities; and, in fine, when the proprietary assemble to reflect on their position, they can see nothing but ruin staring them in the face, and the very men who have brought them to such a hopeless condition, braving the consequences, and combining to prevent the fair conclusion of an investigation into their conduct. Such we must infer to be the object when we find the investigators shut out, and charges distinctly and openly made answered by such flimsy excuses as that to which our correspondent alludes. "Convenience of entry," forsooth! What a monstrous absurdity to allege that any *convenience* should cover such an anomaly as a payment of directors' fees to a *lady!*

There is one calculation in the mind of all parties having the command of public funds, which seems to actuate the directors—that weight of purse will gain the day. We have heard in more than one independent quarter that no expense will be spared, and that other means, besides legal resistance, will be employed to frustrate the opposition in their endeavours to obtain redress. This is not the language, nor are these the measures, of honest and innocent men. If this be the game, we must certainly encourage the opposition to persevere in their efforts to bring to justice persons who play upon the company's funds for their own purposes, and slink away from their responsibility. Under such circumstances, we must admit the opposition have just grounds for refusing further connection with such parties. If there be any independent shareholders amongst that great majority which has been induced to give a blind credence to the promises of the directors, we trust that they will take care to throw the *onus* of expenses on the proper parties.

Of this, however, we have little fear; for it is probable that, as the ge-

neral principles of the late Chancellor COTTENHAM have been affirmed in most of the recent decisions of the House of Lords, his *obiter dictum* in the Universal Salvage Company (Lord MANSFIELD'S case) will be confirmed, and that the due measure of justice will be meted out between the parties in winding-up cases, according to their respective merits or demerits, which must mean that delinquents will be dealt with as they deserve.

[FROM A CORRESPONDENT.]

Much and frequent has been the talk about the formation of new smelting companies, and improvements in that art, so as to protect us both from the foreigner and our colonists. Numberless patents have been taken out from time to time, under different heads, such as "improvements in smelting copper ores," "improved process of smelting," &c., yet we hear of none of these so-called improvements being of any practical utility, so that, for all purposes, we must suppose the old Swansea method to be the best. Some few years since, a smelting-work was established not many miles from this city; this was under a patent process, which was to produce copper at a much cheaper rate, and in less time, than it could be done at Swansea. The works were established, and supplied with *carbonates* from Australia and elsewhere. For some time the works progressed satisfactorily, and were enabled to deliver copper much earlier than any of the Welsh works. Any one practically acquainted with smelting might have known this, as the generality of carbonates being of a higher per centage than regulus from the ore furnace, and differently chemically composed, can be sent to the metal furnace, without going through other preparatory processes. We now understand that these works, which were abandoned owing to a bankruptcy, are now about to be resumed; and the first operations which they are to commence upon is the reduction of the slags left by the old concern. This, then, appears to be the value of some of your patent processes; ore can be smelted, so as to make early returns, but at such a loss that the slags are worthy of being resmelted! To reduce these, sulphurets of a low per centage of copper are necessary, or ores containing simply iron pyrites (vulgo, mundic) are required. Had this patent process been investigated by practical men, there is no doubt that the waste of capital which has ensued would have been obviated, and a fair and open market been given to the miner. No smelting-works should be established solely with a view of smelting particular ores, as every man who is a smelter knows how peculiar sorts can be reduced to make an early return at a sacrifice. What is required is, that improvements should be introduced so as to economise fuel, labour, and an early production, but not those which jeopardise the concern that adopts them, and leave slags so rich that it becomes a speculation to resmelt them, with the additional purchase of poor sulphurets. Some six or seven individuals at present have the command of the Swansea market; and this they will retain until some more comprehensive and practical improvement in smelting has been carried out than has been attempted by all the abortive theoretical patentees who have yet appeared in the field.

THE PATENT VOLTAIC LIGHT.—Under the more appropriate designation of *voltaic*, the electric light is about to be presented to the public, by Mr. Allman (an abstract of whose specification we gave on the 31st of March, 1849), in the first practical illustration of its use that we have heard of. We have been invited to attend this evening at the Polytechnic Institution, Regent-street, to witness the first public exhibition of the voltaic light, as permanently applied by way of substitute for gas, or other means, of artifical illumination. This light having been exhibited by Mr. Staite and others, we shall explain the means employed under Allman's patent, as distinguishing it from its predecessors. Independent mechanism has been in this country always the agent for regulating the electrodes in the several plans for obtaining constant light from electricity. Several of these machines have had an indirect control by the instrumentality of induced magnets within the influence of the current, as in Staite's patent; whilst others have no connection whatever with the electro-galvanic action, as in Le Molt's. The only case in which we have heard of the application of the current in the direct regulation of the electrodes was by a plan of M. Archereau, of Paris, which we believe he has abandoned. Mr. Allman says—"Accident, fluctuation in the electric current, destruction of the electrodes, and other causes, require alteration or adjustment in the relative position of the electrodes. No mechanism can do this. The only means is by making the voltaic current itself, which is sensitive to all such causes, effect this adjustment by one of its six dynamic effects without mechanism—that is, the electric current producing the light, at the same time passing through the lamp, causes one of the pieces of carbon, from which the light is produced, to move when any of the causes above enumerated require it. There are also arrangements by which the electric current can induce motion—for instance, if it circulates round a magnet, the magnet will move; and if a piece of carbon be attached to it, it completes the lamp, which then consists of only two pieces. All the six methods by which the electric current can thus be made to produce motion are covered by Allman's patent, as applied to the production of light from electricity." We shall return to this subject next week, after we shall have had the opportunity of witnessing the exemplification of this doctrine. For the present, we will only add that we hail with satisfaction the entrance of Mr. Allman into the lists with his rivals. If he succeed, it will be a step in advance of the proceedings of other inventors.

COAL IN THE INDIAN ARCHIPELAGO.—Some specimens of coal have been recently brought from Pontiniak, on the south-west coast of Borneo; they are in appearance and quality exactly like our Cannel coal. A native prahu has likewise brought some specimens, which are identical with the Labuan seam. The Labuan Coal Company are progressing but slowly, and are likely to have numerous competitors, native and European; among the latter may be named Mr. Miles, who formerly worked the seam at Labuan, and whose spirit and energy might be imitated with advantage by the company; more especially as the finest veins of coal, of considerable extent and undeniable quality, have been lately discovered, over which the company's monopoly does not extend, which will, no doubt, attract the attention of the enterprising and speculative.

RAILWAYS.—The Sydney papers, received yesterday, contain an account of the commencement of the first Australian railway. It is to extend from Sydney to the interior. The contract for the construction of the Calcutta experimental line has been taken by Messrs. Elmslie and Co., of London, whose tender was the lowest. The tenders for the Bombay and Tanna line (about 20 miles in length) were sent in yesterday, and will be dispatched to the London board of directors by to-day's mail. The estimated amount of compensation for the land and buildings required (which, under the company's agreement with the Court of Directors, is to be furnished by the Indian Government) is 50,000*l.*; of this sum all but 6800*l.* is on account of the last two miles of the line traversing the native town of Bombay, and it is considered doubtful whether the Court of Directors will consider the advantage of a city terminus over a suburban one commensurate with the increased expenditure to Government, attendant on the purchase of town property for the former.

EUROPEAN AND NORTH AMERICAN RAILWAY.—The bill for incorporating this railway has been passed unanimously by the Legislative Assembly of Maine, and the charter is one of unusual liberality; it is to be perpetual in duration, and not subject to legislative alteration. The company will be exempt from taxation, and the stockholders not liable for the debts of the company beyond the assessments on their stock. They may organise on the subscription of $1,000,000, and locate the line on the most practical route to the boundary of Maine in the direction of St. John's, New Brunswick. The Legislature voted $5000 for a preliminary survey, and appointed two eminent American engineers for that purpose. Enough has been already ascertained to show that no serious engineering difficulties will be found on any part of the line from Bangor, in Maine, to Halifax or Whitehaven. The subscriptions made in Maine are to be expended in that State, and those made in the British provinces to be expended in the province where made. By a subsequent Act, it is provided that, in case the said company shall be constituted a corporation in the British provinces, the company may increase its capital stock to an amount sufficient to complete the line through the said provinces, not exceeding $15,000,000, and that the company has a right to issue bonds, and to raise money without further legislation. Similar charters will be applied for to the Legislatures of New Brunswick and Nova Scotia, and they will be undoubtedly granted, as the project has been received with great enthusiasm by all classes in those provinces, which, it is to be hoped, will be reciprocated in this country; and that the statesman, the capitalist, and the philanthropist, may be found combining to carry out a plan which promises to advance the best interests of the whole world.

VALE OF NEATH RAILWAY.—The whole of the works on this line from Neath to Aberdare are rapidly progressing. Great numbers of labourers are at work on every portion, and, as everything is being pushed forward with the least possible delay, it is expected that the line will be ready for opening from Aberdare to Neath in March next, or in May at the latest. The bridge over the Neath river has been commenced.

RAILWAY CALLS.—The amount falling due in November is 368,444*l.* In the corresponding month of last year the sum was 755,826. The total called this year amounts now to 10,367,328*l.* against 19,096,700*l.* in the corresponding period of 1849.

TREATMENT OF COPPER ORES.—No. IV.

By JOHN MITCHELL, Esq., F.C.S., author of a *Manual of Practical Assaying*, &c. &c.

Considered in relation to their origin, the ores treated in Wales may be classed in two grand divisions. The first comprising all the native ores, especially those furnished by the Cornish, Devon, and Irish mines; the second, all the ores imported from foreign countries. Each of the seven classes contain sometimes accidentally ores of both divisions; but, in general, the native mines furnish the poorest, and the foreign the richest ores. There are very few mineral deposits in which the ore, as from the mine, gives a very high per centage of metal. It is generally submitted to a mechanical preparation—the object of which is to concentrate the greater part of the metal in the smallest possible quantity of substance. The advantage of this preparation is to considerably lessen the cost of carriage, and often of the metallurgical treatment—the inconvenience is the loss of cupreous matter when the enrichment is carried beyond a certain degree. The limit of the enrichment is determined in each case by many considerations—the first of which is the expense of carriage; and it is evident that this limit should not be so nearly approached in native minerals, which have to be carried only a few miles, as of those from Australia, or the western coast of America; finally, the native ores, which are poor in metal, are generally employed in the melting, 2; whilst the rich meltings, 4 and 5, are furnished with foreign ores. From this it will be seen that the Welsh method, considered in each of its operations, has undergone, during 20 years (the commencement of the importation of foreign ores), and especially during the last 10 years, many important modifications. The lists of ore sold in Cornwall and Swansea point out in an approximate manner the quantity of copper extracted in Wales from native and foreign ores. The sales in Cornwall comprise nearly all the ores raised in that county, as well as in that of Devon. As to the ores sold at Swansea, five-sixths of the copper they contain is of foreign origin.

The following table points out approximately the proportion of ores of each class furnished every week by the two great markets of the Welsh works, taken as the type of the whole:—

Names of the Seven Classes of Ore.	Ores bought in Cornwall.			Ores bought in Swansea.			TOTAL.		
	Weight.	Copper in 1000 parts.	Total of Copper.	Weight.	Copper in 1000 parts.	Total of Copper.	Weight.	Copper in 1000 parts.	Total of Copper.
1ST CLASS CALCINED In 1 for 2	549·9	0·082	45·0	170·2	0·150	25·5	720·1	0·098	70·5
2D CLASS CALCINED In 1 for 5	1·3	0·228	0·3	20·2	0·228	4·6	21·5	0·228	4·9
3d class rough for 2..	74·9	0·180	13·5	2·7	0·210	0·6	77·6	0·182	14·1
4th class „ 4..	3·0	0·320	1·0	70·5	0·387	27·3	73·5	0·385	28·3
5th class „ 6.	8·9	0·120	1·1	1·1	0·120	0·1	10·0	0·120	1·2
6th class „ 9..	0·2	0·500	0·1	7·2	0·667	4·8	7·4	0·662	4·9
7th class „ 4..	0·3	0·700	0·2	1·7	0·770	1·3	2·0	0·750	1·5
Total of means....	638·5	0·096	61·2	273·6	0·234	64·2	912·1	0·137	125·4

First Operation: Calcination of Sulphurous Ores with Pyritous Gangue.—The ores in which copper exists in the state of copper pyrites, and containing less than 10 per cent. of metal, are nearly without exception submitted to this preliminary operation, because the gangue contains much iron pyrites. Prejudical matters, and especially the sulphur compounds of arsenic—such as mispickel—contribute to swell the category of ores which must be calcined, even when they have the desired per centage of copper, are free from pyritous matter, other than mispickel, and could be conveniently employed in the rough state in the fusion furnace. The fuel employed in heating the calciners is all small, and is composed of 72 parts of anthracite and 28 of coal. The small anthracite employed as the base of all the fuel used in the treatment of copper ores in Swansea, is the non-exportable residue of the celebrated Welsh coal. Considered independently of earthy matters, it gives by ignition in a close vessel from 80 to 85 per cent. of fixed carbon. Although more mixed with earthy matter than the lump anthracite, it contains but a moderate proportion, generally between 5 and 10 per cent. The following table shows the chemical composition of five varieties, simultaneously employed, and often after partial mixture:—

Composition of Five Varieties of Anthracite.

Name of Variety.	Fixed Carbon obtained by distillation of 1000 parts of fuel supposed free from Ash.	RESULTS OF THE DISTILLATION OF 1000 PARTS OF FUEL. FIXED MATTER. Carbon.	Ash.	Total.	GASEOUS MATTER.
1st variety	0·800	0·742	0·073	0·815	0·185
2d ditto	0·801	0·685	0·145	0·830	0·170
3d ditto	0·804	0·765	0·049	0·814	0·186
4th ditto	0·842	0·800	0·050	0·850	0·150
5th ditto	0·853	0·813	0·047	0·860	0·140
Mean	0·820	0·761	0·073	0·834	0·166

The small anthracite, however, employed in the calciners is not quite so pure as that just mentioned, as the heat is not required to be so great as in the other furnaces. Five varieties of this anthracite were analysed, and the mean was—

Fixed carbon	0·723	0·851
Ash	0·128	
Volatile matters	0·149	= 1·000

The caking coal employed gave, by rapid carbonisation in a close vessel, 0·674 of carbon, ash being deducted. The assay of this coal gave—

Fixed carbon	0·663	0·680
Ash	0·017	
Volatile matters	0·320	= 1·000

Whilst on the subject of fuel, it may be as well to mention the composition of the stone coal employed in lieu of charcoal, in certain operations, as well as that of the green wood employed in toughening.

The stone coal employed is in lumps, possessing a fine lustre, and a conchoidal fracture, containing but a small quantity of earthy matter, and absolutely free from iron pyrites. Two samples, taken from different heaps, but from the same mine, gave the following results:—

	1st Sample.	2d Sample.
Fixed carbon	0·896	0·892
Ash (silica and alumina)	0·014	0·018
Volatile matter	0·090	0·090
	1·000	1·000
Fixed carbon ash deducted	0·909	0·908

The green wood consists of—

Woody matter	0·58
Hygrometric water	0·42 = 1·00

The calciners, besides fresh fuel, are fed with small cinders, which fall with the scoriaceous matter under the grate, either of the calciners themselves, or of all the melting, roasting, and refining furnaces, so that the calciners burn a little more fuel, and the others a little less, than that indicated in the tables.

The management of the fire in general is common to all Welsh furnaces, but there are certain special methods common to the calciners alone.

The basis of the method of firing is peculiar, as by it the Welsh smelters are enabled to burn exclusively small coal, and especially dry pulverulent coals, which before could not be employed in calcining furnaces. This is a difficult problem, as the number of useless experiments made on the continent to apply this particular kind of fuel to metallurgical purposes, by its previous conversion into gas, will testify. The difficulty is still greater with Welsh coal, which gives, by distillation, less gas than the lignites employed in experiments of this kind in Germany. These anthracites, by the ordinary spontaneous combustion on bars, give a scarcely perceptible flame, and, in consequence, are completely unfit for heating large reverberatory furnaces, especially the calciners, in which the flame must reach to the flues 20 ft. and upwards from the fuel.

The simple and ingenious discovery of the Welsh smelters consists in the employment of an artificial grate, differing essentially from the ordinary grate, and in the mode in which the air is made to react on the fuel. The grate of each furnace is formed of earthy matters, furnished by the fuel itself; this substance is called "clinker." This earthy grate is carefully fashioned at the expense of the half-softened ash, which continually forms in the hearth. These ashes, which, without a suitable amount of care bestowed by the workman, would completely close the draft, are transformed under his direction, and by their spontaneous agglomeration, into a perfect grate, which neither air nor fire can alter, and through which passes the quantity of air necessary for each stage of the operation. The clinker immediately in contact with the lower part of the burning fuel is carried to an extremely high temperature, in consequence of the great radiation from the adjoining brickwork; and the mass of superincumbent fuel whose cubic capacity is very considerable, it weighing above half a ton. It also contains, in its pasty state, a considerable number of fragments of coal, which, continuing to burn, develope, in contact with the earthy matter, a very great amount of heat.

The fuel ought to be so chosen that, under the influence of this high temperature, the mixture of ash should give a substance which will sufficiently soften by the heat employed to give a solid agglomerate, and sufficiently refractory as not to fuse, and run down in drops into the ash-pit. The attention of the smelters is much given to this important point, their daily work itself showing them the mixtures which produce the best effect with the least amount of labour. This detail, which at first might appear insignificant, is, nevertheless, of the greatest importance. The great experience accumulated under this head in the Welsh smelting-works is one of the principal causes of their success.

The clinker is a less heterogeneous matter than might be supposed, only considering its origin, and without regard to the time (10 or 12 hours), the principal constituents have to react on each other. A sample of good quality presented all the appearance of the cinder obtained during the scouring of a blast-furnace in which iron is smelted by charcoal. The prevailing substance, however, is general in a grey or brown blebby glass, filled with numerous cavities, with smooth and well-fused surfaces. Here and there are small carbonaceous particles, fragments of earthy matters, imperfectly fused in the mass, grains of sulphuret of iron, and small scoriaceous masses of oxide of iron, evidently produced by the roasting and fusion of the pyrites mixed with the fuel. Fragments taken from various levels of the mass of clinker, clearly show all the progressive stages of formation of this matter by the mutual reaction of the silicate of alumina and pyrites, under the influence of oxidating gases at a high temperature. By a coincidence which cannot be too much admired, the silicate becomes richer in oxide of iron, and, consequently, more easily fusible, in proportion as the fragments pass to greater distances from the point at which the mass first agglomerated, and where the fully-formed clinker could not exist without completely liquefying. The analyses of a clinker, stated to be of good quality, gave the following results:—

Silica	0·520	Magnesia	0·007
Peroxide of iron	0·052	Sulphur	0·013
Protoxide of iron	0·220	Iron	0·010
Alumina	0·142	Carbon	0·012
Lime	0·024		= 1·000

Corresponding to—

Silicate of peroxide of iron	0·110
„ protoxide of ditto	0·414
„ earthy oxides	0·451
Sulphuret of iron	0·023
Carbon	0·012 = 1·000

This composition corresponds very nearly to that of a bi-silicate, the oxygen of the bases being to that of the silica as 14 : 27.

[*To be continued in next week's Mining Journal.*]

THE CARDIGANSHIRE MINES.

Up to a very recent period it was the generally received opinion, and it is the fashion now occasionally to maintain, that the ore in this county does not hold to any depth. No hypothesis can be more absurd, even in a theoretical point of view. The mineral deposit is situated pretty nearly in the middle of a grauwacke and clay-slate basin, extending superficially from Cader Idris, in Merionethshire, on the north-east, to the Precelly Mountain, in Pembrokeshire, on the south-west, a breadth of about sixty miles. Both Cader Idris and the Precelly range are alike constituted of porphyritic greenstone, being, it would appear, merely the outcropping heads of that formation; and if at some remote time the intermediate clay-slate shall be so deeply penetrated as to reach its point of junction with the next series, the underlying mass will most probably be found to be a bed of the Cader Idris and Precelly rocks—a species of greenstone sometimes called hornblende, by the Germans *hornblendgestein*, by which is meant the primitive trap of the Wernerian school. When, indeed, the adventurous miner shall have arrived at a depth which will enable him to make this discovery, it may be expected that any further prosecutions of his workings will be profitless, for this species is not in itself very favourable for rich deposits of ore; though Humboldt, when speaking of it, if he means the same thing, observes that it contains very ancient argentiferous veins, but when or where this is to happen is beyond all calculation. The great mining districts of Cornwall are principally situated in a portion of this grauwacke series, or primary clay-sla te, provincially called killas. It there contains those veins of tin and copper which, by their extraordinary produce, have constituted the principal wealth of the county. It rests immediately on the granite, and it is chiefly at or near the junction of the two rocks that the greatest mines are situated. What, then, can be said against a similar condition of things in Cardiganshire? If similar results are produced by similar causes, there cannot be the slightest reason for doubting that the ore will hold all through the superimposed clay-slate, its richest portion being, perhaps, at its greatest depth.

The permanency of these mines, however, will be more satisfactorily proved by arguments founded on practice. Let us look, then, first at the undeviating returns given during the last 20 years, without reference to what they had continued to do ages before. The Lisburne were put into work 17 years ago, with a capital of 7500*l.* They are this year making 18,000*l.*; and the selling capital is now quoted at 45,000*l.* The growth, as well as the permanency, of the value of both principal and interest is here undeniable; but the advance of the value of the mining property in general is equally evident, for at this moment new and old mines are being opened in every direction; and in a very short time there will not be a spot of ground unoccupied. In the next place, let us look at the re-animation of old and abandoned mines that have lain dead for centuries—an object interesting to all, especially when there is almost a certainty of their again affording employment to thousands of hands, with every prospect of giving thousands of profit. Of this Daren is a good instance—having been abandoned as worthless by a powerful company, and again resumed most successfully by another, all within the space of the last 10 years. The late party spent here 10,000*l.* to no effect—a sum of money, as it now appears, 10 times more than sufficient to have proved it to be still a great mine. It would be difficult to account for the failure of this great outlay if there were not extant a plan and section of the mine made in 1744, which shows that it was expended without the direction of proper skill and judgment; for the adventurers never found the main body of the work, but confined themselves, with all this extravagant expenditure, to a mere branch of the lode. From this old section, it appears that, as early as the beginning of the last century, the mine had reached a depth of more than 63 fms. by hand-pumps; and that for several years a bottom of 200 yards long had been worked, yielding yearly from 800 to 900 tons of steel-grained silver ore. This was done by a Flintshire company, who, a little before their lease expired, suffered the whole to be drowned, most probably to prevent its too easy resumption by others. It is not said that it was the consequence of the bottoms having become poor; and, if it had, a reason would have been given only for supposing that a poorer floor of ground had temporarily come in; for within half a mile to the east, at the foot of the hill, is Cwm Sebon—a mine whose *surface* is as deep as, if not *deeper*, than these *bottoms* of Daren, and the bottom of whose engine-shaft is down 60 or 70 fathoms *deeper* still, in a *very good course of ore*.

Little, therefore, can be said with any semblance of justice against either the depth or length of these deposits; in fact, it is declared by the very best living authority with regard to Daren, the example here adduced, that its general appearance holds out a prospect of work highly profitable for, at least, another century, or, more properly speaking, until the ingenuity of man shall be taxed to invent machinery more efficacious than any now known to follow bodies of ore in depth. Such is the opinion of practical men, and the same will apply to the Lisburne, Cwmsymlog, Esgair Mywn, Allt-y-Crib, Goginan, and, in short, to all the great old mines of the county. Notwithstanding all this, there are some croakers who have ventured to predict, and profess to believe in, other and more tragical terminations; in fact, so lugubrious are their ideas, and so cloudy are their views with regard to posterity, that they seem to have made up their minds, as far as Cardiganshire is concerned, that future generations are to live without any metal at all. This would be a bad job for our offspring; for ourselves it is some consolation to know, for a certainty, that there is already discovered much more than will last our lifetime.

IMPROVEMENTS IN THE MANUFACTURE OF ZINC.

Fig. 1.

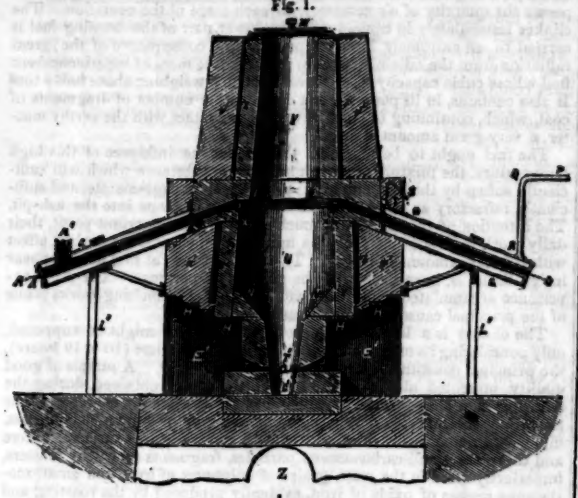
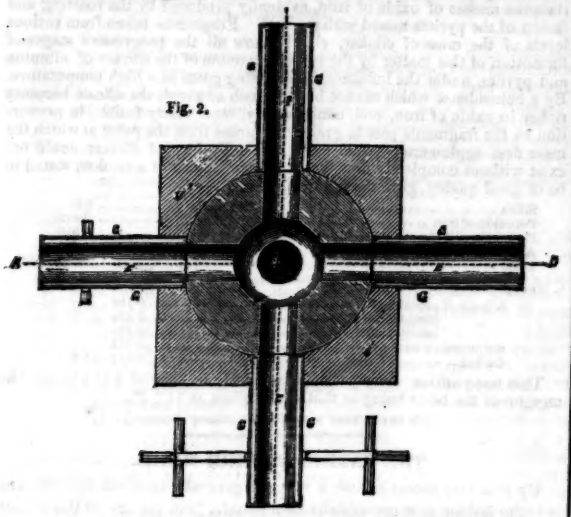


Fig. 2.



[Patent dated April 20, 1850. Specification enrolled October 20, 1850.]

The general object of this invention is to do away with the troublesome and expensive processes of assorting, pounding, and crushing, now ordinarily followed, in order to the extraction of zinc from its ores; and this is effected by a method of direct reduction. We extract the following description of the apparatus employed, and of the peculiar processes followed in connection therewith, from the patentee's specification:—

Fig. 1 is a vertical section of the apparatus on the line A D of fig. 2, which is a horizontal section on the (dotted) line A, B, C, D of fig. 1. C is the hearth of the furnace; F, F, F are the tuyères, which are three in number; N is the shoot; U the chamber of the furnace. So far the parts of the structure are very similar to those of a small blast furnace. At I K the upper part of the chamber, U, is suddenly contracted, so as to form a neck, V, or narrow passage, between the upper and lower parts of the furnace. The charge, as it falls through this neck, leaves necessarily a vacant annular space at x x, between it and the sides of the furnace, where the volatilzable matters may collect. FF are four rectangular passages, formed of cast or sheet-iron, which lead off at right angles, and in an inclined direction from the annular space, x x, and each passage is encased for a certain distance within a chamber, G, through which cold water is kept continually circulating, flowing in from the tube, P, Q, R, and escaping through the pipe, S S. At the lower end of each of the rectangular passages there is a tubular passage, A^1, by which the uncondensed gases of the furnace are carried off to different points, to be employed for heating purposes, as hereafter explained; and each passage is provided at its lower end with a sliding door, A^2, which may be closed or opened as required. W is a lid or cover by which the furnace is closed at top, and which fits into a groove made for it, so that there may be no escape of the gases at that part. All the interior parts of the furnace are formed of fire-brick, with an outer wall or casing, V^1, which may be made of ordinary brick; and between the outer and inner walls there is left a space, Z Z, which is filled with some substance which is a bad conducter of heat. HH are strengthening plates of cast-iron, which are inserted into the lower brickwork, V^1, immediately over the tuyère openings, E^1 E^1. L^1 are cast-iron frames, which carry the passages, F F, and cold-water chamber, G.

The mode of operating with the apparatus is as follows:—After the furnace has been built, it is left to dry; then a fire is kindled on the hearth, and kept up for about three weeks by supplies of fuel (by preference coke), introduced through the throat. The furnace being in this manner filled with incandescent fuel, a small charge of quick-lime is thrown in. As soon as this charge has descended as far down as the tuyères, a mixture of ore, flux, and fuel is fed into the furnace, the top of the furnace closed, and a moderate blast of atmospheric air applied, by means of a blowing machine. The fuel, the flux, and the ore are in such proportions to one another, that the whole of the zinc contained in the ore shall be reduced, and then volatilized, while all the foreign matters shall form with the flux a residual slag, of more or less fluidity when in the heated state. The fuel employed may be either charcoal, or coke, or common coal, or anthracite, or turf, taking care always that it is of a sufficiently hard nature to resist the incumbent pressure of the charge in the furnace.

The quantity of fuel employed should be greater at the commencement than during the subsequent stages, and should in all cases be sufficient not only for the complete reduction of the zinc, but also to leave so considerable an excess, that when it arrives directly before the tuyères, the combustion of the fuel shall not give rise to any gaseous oxidating product; such, for example, as carbonic acid. The flux (the selection of which, as well as that of the fuel, depends on the quality of the ore) must be used in such a state as not to produce any oxidating matter during the formation of the slag. For this reason, when the nature of the ore requires the employment of lime as a flux, the lime should be used in a caustic state, and not as a carbonate; and for the same reason it is advisable to use a blast of dry air—that is to say, air deprived of aqueous vapour. The products of the furnace are, in the first place, the gases arising from the combustion of the fuel; secondly, the vapours of zinc; thirdly, the non-volatilizable matters, consisting of scoræ or slag, and of reduced metallic substances of greater density than the zinc. The throat of the furnace being closed, "the gases arising from the combustion of the fuel" pass off through the passages, A^1, and are made use of either for the purpose of heating the boiler of the steam-engine which drives the blowing-machine, or to burn lime when used for a flux, or to melt the zinc which is carried over in a state of vapour, or to dry and roast the ores. The "vapours of zinc" are condensed in the passages, F F, and may be easily withdrawn therefrom by means of a rake (the rectangular form of the passages, F F, affording great facilities for this purpose), after which they are reduced and formed into ingots or bars. The "non-volatilized" or residual matters which collect on the sole or hearth of the furnace, are run off from time to time, according as they accumulate.

The ores containing zinc may be divided into two classes; firstly, those in a state of oxide, either free or combined with carbonic or silicic acid; secondly, those containing sulphuret of zinc (blende). When the ores are of the first class (oxides), they are first dried, and if they contain a carbonate, they are subjected to a roasting process. The flux employed for the treatment of ores of this class is quick-lime, the quantity of which varies according to the quantity of earthy matters contained in the ore, but should be sufficient for the formation of a bisilicate, or, as it is commonly called, a good slag. When the ores contain any other metals, such as iron or lead, these metals are reduced to the metallic state, when they collect on the sole of the furnace, where they arrange themselves in different strata, according to their respective densities, and may be drawn off separately. When the ores are of the second class (blende), they are treated in one of two ways; either by roasting, which brings them into the state of oxide, which oxide is then mixed with a little damp clay, and formed into blocks, which, after being dried, are treated in the manner before described; or (which is considered the preferable way), these sulphurous ores are mixed with a quantity of iron ore, so that when the metals are fused the iron shall combine with the sulphur, and set the zinc at liberty.

The flux employed in this case is quick-lime, and if the ore contain a portion of baryta or gypsum, then fluorine is added. The quantity of quick-lime employed depends on the quantity of earthy matters contained both in the zinc and iron ores. The iron ore best suited for this purpose is that containing zinc, but in too small a quantity to be treated separately as a zinc ore. When, however, the iron ore contains water or carbonic acid, it is necessary that these should be expelled by roasting, in order that no substance susceptible of oxydizing the zinc may be introduced into the furnace. If the iron ore contain too great a quantity of oxidating matter, then it is preferable to expel the sulphur from the zinc ore, by means of cast-iron or malleable iron. This plan presents the advantage of driving off the whole of the substances capable of re-oxidizing the zinc which has been reduced. When a sulphuret of zinc in which there are several other metals, such as iron, copper, lead, silver, &c., is treated in the furnace, there collects on the sole, besides the slag, a stratum of argentiferous lead, on which is superimposed a stratum of cast-iron, arising from the excess of iron ore used in the process. Again, above the stratum of iron there collects a mass composed principally of sulphuret of iron, sulphuret of copper, and portions of the sulphurets of other metals.

If white, grey, or yellowish oxide of zinc should be formed accidentally in the passages, F F, it can be made use of directly as a colouring matter, and sold as such; or else it can be mixed with damp clay, made up into blocks, dried, and again passed through the furnace; in which case a sufficient quantity of quick-lime should be added to convert all the clay into a fusible slag. When ores containing zinc in a state of oxide have to be treated, they should be previously assayed, in order to effect an analysis, and to ascertain the quantity of earthy matters contained therein capable of being converted into scoria, and which will determine the proper proportion of quick-lime to be added. The lime and magnesia contained in the ore are also to be taken into account.

When ores containing zinc in the state of sulphurets have to be treated, the quantities of sulphur, earthy matters, and metallic substances contained therein should also be ascertained by preliminary assay, so that the quantity of iron ore used in the charge shall be sufficient to produce the cast-iron requisite for combining with all the sulphur that may be in the zinc. In order that the combination of the sulphur and iron may be the more completely effected, it is advisable to employ a slight excess of iron ore. But if there should be reason to apprehend that the iron ores might produce too great a quantity of oxidating matter, and thereby create too great a quantity of oxide of zinc; then cast or malleable iron may be directly used for the purpose of combining with the sulphur, in which case the proportion of cast or malleable iron is to be determined by the quantity of sulphur contained in the ore, always employing a slight excess of the iron. The proportion of quick-lime or of fluorine used for making a fusible slag will depend on the quantity of earthy matters contained in the ore to be treated, as well as in the iron ore when used for combining with the sulphur. The quantity of fuel employed in this case will depend not only on what has been already stated, but also on the richness and fusibility of the iron ores, and in all cases should be so regulated that the working of the furnace shall in all respects resemble that of a blast furnace for casting purposes. As sulphuretted ores contain generally other metallic substances besides zinc, a great quantity of reduced metals, and of crude metals, composed principally of sulphuret of iron, will collect on the hearth of the furnace, and combine with the sulphuret of copper and a portion of the sulphurets of the other metals. In this case, therefore, it is better to run off the metal more frequently than in the preceding cases. The lead thereby obtained can be recast into pigs ready for sale, or submitted to the process of cupellation, if it should contain silver; and any other masses of crude metal may be treated by any of the well-known processes, in order to extract the copper therefrom. As in the preceding cases, the whole of the zinc will be volatilized, and collected condensed in the passages, F F, and chamber, G.

From the preceding description, it will be seen that the distinguishing features of the improved apparatus and processes, which form the subject of this invention, are these:—

1. The direct reduction of the ores of zinc by means of a smelting furnace and blowing apparatus, without previous assorting, pounding, or crushing.

2. The employment of a smelting furnace for this purpose of the peculiar description represented in the engravings, and before described—that is to say, of a furnace having a narrow neck or passage, by the descent through which of the charge an annular space is formed around it in the top or crown of the furnace, where the vapour of zinc collects, but is prevented by the heat from condensing; having also passages of a rectilineal form, through which the vapours of zinc pass off to be condensed (a form which allows of the rake traversing, and completely clearing the passages from end to end); and, further, condensing chambers, through which a current of cold water is kept continually flowing, in order to aid the process of condensation.

3. The avoidance of introducing into the furnace any substance capable of re-oxidising the zinc produced, which is effected by the selection of quick lime as a flux, by the drying and roasting of the hydrated and carbonated ores of zinc and iron, by the drying (in certain cases) by means of hot blast, and by the employment of cast or malleable iron, for the purpose of combining with and extracting the sulphur contained in sulphuretted zinc ores.

4. The direct treatment of blende which has not been roasted, and the reduction thereof by means of the iron employed—that is, either the cast or malleable iron, or the iron produced by the ore, which becomes converted into cast-iron, or sulphuret of iron, in the furnace itself.

5. The peculiar method of treating sulphuretted, or arseniuretted ores of lead and copper, containing zinc, whereby the zinc is separated from these other metals, and obtained in a metallic state.

6. The method of turning the zinc contained in ores of iron to good account, without injuring the latter metal.—*Mechanics' Magazine.*

A Veteran Miner.—Died, at his residence, Crellow, in Stithians, J. Martin, Esq., aged 80 years. He was one of the oldest, and most respected of the mine agents and adventurers of Cornwall, having been engaged in the former capacity upwards of half a century. It was mainly owing to Capt. Martin's perseverance and industry that Tresavean Mine was not abandoned nearly 40 years ago, when the chief part of the adventurers had resigned their shares as worthless, Capt. Martin fearlessly stood forth as the advocate for further operations in this interesting locality. As a shareholder he met abundant reward, for shortly afterwards Tresavean adventurers realised as profit *in one year* alone, the unexampled sum of more than 60,000*l.* Capt. Martin was raised by Providence from the humble rank of life—the working class, but he always remembered his origin, and the rock from which he was hewn. He delighted to give labour to the thousand of miners in his neighbourhood. The widows and the fatherless have often been relieved by his charity. Capt. Martin's character was marked with some singularities, and no doubt, with some foibles, but his firm attachment to principle, pure benevolence, unshaken constancy, and indefatigable perseverance, may properly be held up to the view of all persons occuping important stations, or engaged in useful enterprises, as qualities not less to be imitated than admired as a character which will stand distinguished among those *qui sui memores alios fecêre merendo.*

Penalties for Overcharges by Railway Companies.—The Commissioners of Inland Revenue have fined the Dundee and Arbroath Railway in 100*l.* for overcharges on Parliamentary or third-class passengers, besides taxing the whole of the money paid by the passengers at the rate of 5 per cent., as if it had been paid by first and second-class passengers. Similar overcharges made by the Stirlingshire Midland Junction are to be dealt with in the same way, under the General Railway Act.

Original Correspondence.

HEMATITIC ORES OF IRON.

Sir,—In reply to your correspondent, "W.," the term hematite, or kidney ore, strictly applied, denotes only such varieties of peroxide of iron as are found crystallised in hemispherical groups, giving the mass a close resemblance to kidneys—whence the name. The term, however, for want of a more convenient designation, is often applied to all red ores of iron, in which the peroxide is so free from earthy matter as to aggregate in compact metallic masses, although the true hematitic crystallisation may be substituted by a different character. It is not uncommon to hear the black friable protoxide, which is often found mingled in veins of peroxide, entitled black hematite, though it has not the least of the hematite structure; but as I have never seen any veins where peroxide of iron predominates, in which occasional specimens of hematite are not found, this latitude of denomination is very likely to be continued. Very fine specimens of the true crystallisation are obtained from the Lancashire and Cumberland mines. The masses, on being fractured, exhibit a radial crystallisation from the centre of deposition to the curved surface, and in some specimens a series of concentric layers—each layer crystallised in the same convergent direction; these ores, and the best ores of the kind, are stratified in the carboniferous limestone, being more free from sulphur, arsenic, &c., than those deposited in the primary rocks or sedimentary schist. Where the carboniferous limestone is productive in metallic sulphurets, the character of the ore is much altered; and both in this country and on the continent is contaminated with sulphurets of lead, zinc, tin, &c., which trouble the smelter. The deposits of this iron ore seem to have a reference to the thickness and elevation of the carboniferous limestone. In the Forest of Dean, where the limestone bears a large proportion to the thickness of the coal measures, there is an important deposit; but in the eastern division of the Welsh coal-field, where the depth of the coal measures bears a much larger proportion to the limestone, there is no continuous or appreciable vein. In the gorge of the Taff Valley, near Cardiff, where the limestone on either side rises into a prominent geological feature, there is a partial deposit worked for adjacent furnaces. This ore has a singular coincidence of character with the Dean Forest ore. The ores on the opposite side of the Channel, in the same formation, at Bristol, and to the south of the Somerset coal-field, present very different characters. I am not aware of this iron ore being detected in the flat measures of the midland districts. As a general rule, the more mountainous the limestone, the more probable is its presence; and it must be looked for towards the upper beds of the series. Ores of this description vary in richness from two causes—the quantity of matrix which is intermingled with the oxide, or the quantity of crystals of silex, which appear to be deposited by the same agency which separated the oxide from its limy base. The more complete this separation, the more perfect is the hematitic crystallisation; whereas in the other condition, the per centage is further reduced by crystals of carbonate of lime and iron. The true hematite, which is so prevalent in the Lancashire formation, is exceptional in that of the Forest, being substituted by a curious stalactitic crystallisation, which has obtained it the local epithet of *brush* ore. This is, no doubt, a consequence of its hydrated composition, containing about 10 per cent. of water, not combined in the other ores, which contain instead an equivalent per centage of silex. The limestone of Dean Forest being entirely destitute of metallic sulphurets, the iron ore has not the slightest traces of sulphur; whereas minute per centages are detected in the Ulverston and Whitehaven ores. The iron ore of these measures is deposited in true beds, coincident with the plane of the strata, but not with the uniform thickness of beds of coal or ironstone, but in intermittent caverns of very variable dimensions, from a few inches to many yards in height, grouped together with frequently some hundred yards of barren ground intervening betwixt the groups. There is a partial deposit of hematitic ore in the Forest which is worthy of notice, because its position answers to veins of fracture, or lodes, in the primitive formations. It crosses a bed of sandstone rock, 90 yards in thickness, which is the cover of one of the coal seams, running in an east and west direction at right angles to the line of the dip, and filling three or four fractures, which have taken effect at a point where the rise of the measures becomes suddenly altered from nearly 45° to a comparative level. A line drawn south-east to north-west through the centre of the coal basin, passes through the thickest part of the deposit, which diminishes on either side. This ore is 150 yards higher in the series than the main deposit in the limestone; and there is no trace of it in the intermediate beds. It is, nevertheless, very similar to the brush ore beneath. There is, likewise, in the Forest of Dean a bed of hematitic ore in the quartzose or farewell rock (electrical research will no doubt eventually explain this interposition of pure silex between the coal measures and the limestone), which is, for aught I know, as exceptional as the beds of coal in the millstone grit of Derbyshire. The best surface indication of the presence of this ore is the deep red stain imparted to the neighbouring soil, especially to the marl of limestone.

The facilities for smelting rich ores with hot-blast, and the great and extensive impulse which railways have given to the iron manufacture, have called great attention to these deposits of oxide of iron, and greatly increased their consumption. But it remains more than doubtful if the blast-furnace, which was introduced to separate the iron from ores containing the earthy matter in intimate and, perhaps, chemical division with the oxide, such as the ironstones of Sussex and the coal-fields, is the appropriate instrument for reducing ores which have such a preponderance of pure oxide as those of Lancashire and Cumberland. The pig-iron has to be subjected, at a great expense and loss, to a series of retrograde operations, to deprive it of the carbon with which, so far, at least, as wrought-iron is required, it has been unnecessarily alloyed, and to bring it back merely to that freedom from solid combination which it originally enjoyed in the ore. It has long been acknowledged that there is room for a process more adapted, as every process ought to be, to the peculiar nature of such materials, and many attempts have been made to supply the defect. These have hitherto failed in economy; but such failures, especially in these days, which have seen so many difficulties vanquished, are no argument against ultimate success. Firm faith in results, and indomitable determination to overcome obstacles by acute and appropriate resources, based upon true principle, united with that spirit to expend the necessary means upon experiment, which enabled Cort to give us the process of puddling, will undoubtedly, sooner or later, open to British capital a far more profitable field than *now* exists for the manufacture of bar-iron, first in this country, and then wherever unadulterated oxides are to be found.—David Mushet: *October* 24.

TERRESTRIAL MAGNETISM.

Sir,—It is quite true that Mr. Hopkins has not entered into any speculative explanation of the nature or origin of the magnetic current passing through the centre of the earth from the north to the south pole, but neither was it necessary he should (though it is strange to assert, as Mr. Lake does, that he gives no explanation) embark in such a theory. His object is to adduce the principal facts which indicate the existence of the current. The main grounds are three—First, the fact to which all geological research bears testimony; that the masses of the crust of the earth have a uniform arrangement, such as would be imparted by a magnetic current acting through the surface from south to north. Secondly, the fact established by observations, that the land has a movement northward, which such a current would induce. And, thirdly, that that the continents of the northern hemisphere display the remains of Australian organisation, whereas, on the reverse, the equatorial and southern latitudes contain no relics of life indigenous to the north. The inference from these facts he supports by a multitude of coincident proofs that all our continents have had their origin at the southern pole, and are proceeding to their termination at the northern. As a consequence, he dismissed the theory of igneous solution, of which we know nothing at all, considering that aqueous solution, of which we know a great deal, is fully adequate to account for all appearances, without recourse to that fiery and forlorn hope of science. Now, though the practical purpose (and a practical purpose ought to be a part of every good work) of Mr. Hopkins's work be to improve the science of mining, it surely, if it establishes so grand a system of facts, does a great more. If his theory be good for the objects of mining, that is much more than a presumption that it is good *in se*. Mining has pierced and overturned many geological theories; but hitherto geology has opened very few good mines, and a theory which the results of practical mining confirm, throwing a certain light before its steps, which never was before obtained, can scarcely be an impracticable supposition. But even were it ever so hard to conceive, as Mr. Lake alleges, how the state of things re-

presented by Mr. Hopkins could exist, it is evident the difficulty of a conception can form no argument against facts. These must be established remorselessly, however obstinate to account for. Nevertheless, I should think that, with Mr. Lake's knowledge of the subject, he would not find it impossible to imagine circumstances capable of producing the central magnet. Some of his attempts seem quite as arduous. Baron Reichenbach, whose curious researches in magnetism have thrown light upon many mysteries, not excepting even the old *divining rod*, the testimony to whose eccentricities, like many other phenomena which they cannot explain, men have chosen to measure by the fractional limit of their knowledge, rather than by their boundless scope of ignorance, maintains that a magnetic current circulates through the earth from the north to the south pole, by a network of iron in a structure analogous to that of meteorites; but whether this or any other supposition be received, it will not do to dismiss the evidences of a current on the surface from south to north, or refute them by the experimental workings of an artificial globe, because we have not attained a facile and undeniable explanation of the cause of an interior current from north to south.

The conclusion of Dr. Faraday, that the magnetic currents circulate from the equator to each pole, is based on the supposition that the rotation of the earth is the sole cause of those currents; and, therefore, this conclusion must fail, if the rotation of the earth should prove to be an *effect*, rather than a *cause*, of its magnetic condition. It is far from my object to disparage the invaluable geological researches of the past half century; they have paved and prepared the road to truth. We have now to learn what is the spirit which informed these dry bones of science, and continues to animate the terrestrial frame.—DAVID MUSHET: *October* 23.

PYROGEN AND LUNAR GEOLOGY.

SIR,—Nothing betrays more the want of sound sense and argument, as also displaying incapacity of judgment to grasp the real laws of the terrestrial system, than far-fetched words and continued reference to objects which are beyond our reach. Mr. Lake carries his fancy to the Milky Way to determine the cause of the variation of the magnetic needle! Mr. Nasmyth's imagination leads him to believe that it is easier to study the geology of the moon than the wrinkles of his own habitation! Your readers, as well as myself, must feel greatly indebted to your very talented and eloquent correspondent, Mr. Mushet, for his masterly letters, and more especially those in which he endeavours to check, by the soundness of his arguments, the metaphysical absurdities which occupy too much space in the scientific journals of the day.

Those who have read Mr. Hopkins's work will remember the following very just observations:—"If we would speculate to any useful purpose on a former state of our globe, and on the succession of events which from time to time have changed the condition and form of its surface, and still causing incessant changes, we must confine our inquiries to the laws and effects of terrestrial physics, and not attempt to solve the problems by reference to celestial objects, of which we know nothing beyond their movements. If we differ so materially on those points which we can handle, it is not probable that we could decide by referring to objects so much beyond our reach."—R. G. T.: *Ulverston, Oct.* 24.

ON PYROGEN.

SIR,—Notwithstanding Mr. Lake's explanation, in your last, of his meaning of pyrogen, &c., I must, nevertheless, state that I am still in the dark with respect to it and his principles. I have no doubt Mr. Lake's investigations are a source of gratification to himself, but I regret to state, that they are to me perfectly unintelligible as yet. It appears evident from the remarks in his reply to me, that he has not perused Mr. Hopkins's work on *Terrestrial Magnetism*. Mr. Hopkins plainly demonstrates the facts in chapters 1 and 2, and establishes his theory thereon. He allows no loose assumptions to creep into his arguments. The most important point of the question is the fact, that we can predict all effects connected with magnetism, whether its statics or its electrodynamics; therefore, at all events, it is as yet the only theory by which we can determine such questions, and its great simplicity renders it intelligible to the youngest intellect. I have actually seen a little boy solving the various positions and the effects of several magnets in experimenting on a table by Mr. Hopkins's theory, and as regards myself, it is the only one I know of by which such important questions can be determined, whether at sea, in the field, in the mine, or in the laboratory. Barlow's notions of equatorial currents are all but exploded. Prof. Faraday's most elaborate researches have thrown quite a new light on the magnetic axis, &c. I recommend Mr. Lake to study some of the more recent investigations, which, I think, will enlighten him very considerably, and, perhaps, tend to assist him in his inquiries. I shall conclude this, by quoting, as appropriate to the subject, a few words from Mr. E. Hopkins's truly practical and scientific work:—"Taking this simple principle as a guide, with its various consequences under different circumstances, we soon perceive that we can not only account for the various phenomena of magnetism; but, in a word, all phenomena connected with terrestrial physics, and that we are enabled also to reason from the known to the unknown, and actually to predict facts before trial, not merely to satisfy idle curiosity, but questions of practical and commercial utility. Indeed, theories are mere bubbles, and unworthy of attention, unless they can be fairly demonstrated and rendered useful." And, further, in another part Mr. Hopkins goes on to say:—"There has been too much dependence placed on celestial observations already for the progress of geology or terrestrial physics. Some attempts have been made to show how the globe may have become hot and cold; change its poles and its magnetic conditions by its probable exposure to the effects of intense stellar radiation in passing through the Milky Way. But such speculations are flights of fancy, and unworthy of the notice of intelligent men."—ALBERT DUMARESQ: *Chester, Oct.* 22.

ON PYROGEN.

SIR,—Mr. Coxworthy is not strictly correct in stating, as a general result, that fire destroys the bond of matter. During combustion matter is neither lost nor destroyed, although a great change takes place in it. Fire is a mere name for the light and heat developed during the progress of a chemical operation, which cannot take place without the cause of the light and heat being present. The light and heat which we call fire are developed during the passage of matter from one state to another—during the overthrow of one set of chemical affinities, and the establishment of another in its room; and as this takes place chiefly, if not altogether, through the instrumentality of the electric fluid, the name "pyrogen" does not seem to be an inappropriate one for it, as the fluid is literally a begetter of fire.

Mr. Coxworthy is also incorrect in stating generally "that chemical action is referable solely to electricity, but to which 'pyrogen' can have no reference;" for pyrogen and electricity are two names for the same thing, and, therefore, what is referable to one is equally so to the other. If he means that a "begetter of fire" (pyrogen) has nothing to do with chemical action, he is equally in error; for, as we have just said, fire is itself due to chemical action, and could not exist without it; and, to use his own words, "chemical action is referable solely to electricity"—that is, pyrogen. Some tell us that the human body is in a permanent state of slow combustion, the effect of the chemical action going on within it. Assuming this to be the case, electricity, the chief agent in the chemical action, is here also a begetter of fire.

When Franklin proved the identity of lightning and electricity, he did not also prove that electricity was material. He thought it was so, as did Sir I. Newton before him, but gave no demonstration of the fact. I was the first who published an experiment for the purpose, and so contrary was it to the prevailing ideas of the learned in such matters, that my first experiment was, like Franklin's, literally *burked* at one eminent society. Had Franklin proved the material nature of the electric fluid, we should not find such a supposition as the following concerning it:—"It is *supposed* that a peculiar fluid pervades the pores, if not the actual substance, of the earth, and other natural bodies"—(Prof. T. Young's *Syllabus of Lectures on Natural Philosophy*, Royal Institution, 1802, p. 150). Neither would "electricity" have been described in Rees' *Cyclopædia* as "the name of *an unknown natural power*, which produces a great variety of peculiar and surprising phenomena." And the late Prof. Fownes, in his *Manual of Chemistry*, 2d edition, page 82, would not have inserted this caution—"It is necessary to guard against the idea which the term naturally suggests of an actual bodily transfer of something, &c. The real nature of these phenomena is entirely unknown, and may, perhaps, remain so."

On your correspondent's principle of awarding the merit of a discovery to the person who first publishes an idea without proof, instead of to the person who first experimentally proves the fact, the most extraordinary changes would take place on this head. Franklin must no longer have the merit of proving the identity of electricity and lightning, for Winkler had asserted the fact before him. Neither was he the first to draw the fluid from the atmosphere, for it is recorded that it appeared at the points of the spears of Cæsar's troops whilst they were marching in Egypt; and thus we shall be led to the old-fashioned practice of ascribing great feats all to a certain individual, nameless to ears polite, or Julius Cæsar. Herschel must no longer be regarded as the discoverer of the planet that goes by his name, for Tycho Brahe had mapped or catalogued it centuries ago. It was likewise seen by Prof. Mayer, of Gottingen, in the year 1756, being the 964th star of his catalogue. MM. Leverrier and Adams must also cease to claim the honour of discovering Neptune, for its existence and place were proved theoretically before they turned their telescopes upon it.

Ordnance-office, Portsmouth, Oct. 28. JOHN J. LAKE.

MINERALS—THE GREAT EXHIBITION.

SIR,—The Commissioners' list of the mineral products of this country, published in last week's Journal, was evidently prepared in great haste, being deficient, as will be seen by the subjoined list of localities and products not included.—A MINERALOGIST: *London, Oct.* 30.

LANCASHIRE—The whole district of Furness supplies the fine hæmatite iron ore, copper and lead.
CHESHIRE—Iron at Alderley Edge and Duckenfield; lead at ditto, and Peckferton-hill.
DEVONSHIRE—Gold, North Molton; cobalt, Sampford & Wilsworthy; silver, Wilsworthy.
GLOUCESTERSHIRE—Lead, Durham Down; iron, Bilton, Acton, Stone, Awre, Webney, and Trethewen.
HANTS—Isle of Wight, iron sand, copper pyrites.
MONMOUTHSHIRE—Iron, Blaenavon; lead, Cefn Pwlldubill.
NORTHUMBERLAND—Zinc, Allenheads, Coalclough; molybdena, Caldewa, Hesket, and Newmarket.
SOMERSETSHIRE—Manganese, Mendip; zinc, Shipham.
SURREY—Iron, Haselmere, Dunsford, Cranby; iron sulphuret, Mattinghill, Rottendean, and Penshurst.
WESTMORELAND—Copper, Keswick, Wastet Head; gold, ditto; bismuth, Caldbeck Fell, Tungsten; molybdena, Wolfrans, ditto; ironstone, Dunfell and Shap.
YORKSHIRE—Zinc, Grassington Moor; copper, Middleton, Tyces.
BRECKNOCKSHIRE—Lead, Coed Cymmer.
CARNARVONSHIRE—Copper, Llanberis, Llanclldno, Dolawyr, Ormes Head, Pont-abu-Glarslyn; iron, Moel Ellon; zinc, Llangynog.
CARDIGANSHIRE—Silver, Darrenfawr; zinc, Lisburne.
DENBIGHSHIRE—Iron, Rhuabon, Pont Cysilte.
GLAMORGANSHIRE—Iron, Merthyr, Gower; lead, Gower; manganese, Gower.
MONTGOMERYSHIRE—Zinc, Llamymynech.
PEMBROKESHIRE—Lead, Llangrnach; copper, Milford; iron, Tenby.
ABERDEENSHIRE—Iron sand, Dee, Moneymusk, Petenwim, Aberdeen; lead, Monattru.
ARGYLLSHIRE—Molybdena, Conybury.
AYRSHIRE—Ironstone galsten, Kyle.
BANFFSHIRE—Antimony sulphuret, Keith.
DUMBARTONSHIRE—Iron, Kirkintilloch.
DUMFRIESSHIRE—Plumbago, New Cumnock.
FIFESHIRE—Iron, Dunfermline.
HADDINGTONSHIRE—Copper, Fassney Burn; iron, Old Humstocks.
INVERNESS-SHIRE—Molybdena, Glenelg.
LANARKSHIRE—Copper, Lead Hills and Wanlock Head; zinc, Lead Hills; manganese, Lead Hills; nickel, Wanlock Head.
LINLITHGOWSHIRE—Zinc, lead, ironstone.
MORAY—Lead, Sassiemouth; silver, ditto; manganese, Quarry Wood.
PERTHSHIRE—Lead, Clifton Mine, Tyndrum; copper, ditto; zinc, do.; gold, Glen Turret.
RENFREWSHIRE—Lead, Eglesham.
ROXBURGHSHIRE—Bog iron ore.
STIRLINGSHIRE—Cobalt, Alloa; nickel, ditto; silver, ditto; copper, ditto and Airthrie; iron, Kilsyth.
WIGTONSHIRE—Lead, Whitehorn; copper, ditto.
LEITRIM and ROSCOMMON—Iron.
HEBRIDES—Isla, silver and lead.—Skye, iron sand.
SHETLANDS—Copper, manganese.

FOURDRINIER'S PATENT SAFETY APPARATUS.

SIR,—It is pleasing to observe, that according to the note of Mr. Fourdrinier, in your Journal of the 19th inst., the colliery proprietors are becoming more practically aware of the value and utility of that gentleman's excellent invention, by forwarding daily applications for the same. Mr. Fourdrinier also states that, previous to my notice appearing relative to the breaking of the rope at the Killingworth Colliery, he had an order for the affixing of it to the cages in that pit; and as the expression "some weeks" is used, a query passed through my mind—does it take weeks to fit up the cage with this noble safeguard? If so, and the orders come in daily, we have at once to shift the responsibility and the reprehension, which has hitherto attached to the owners generally, to Mr. Fourdrinier, inasmuch as the implied complaint in his first letter was, that only between 30 and 40 collieries had adopted it. Why, if two weeks be the least implied in the term "some weeks," it will be upwards of 50 years ere such apparatus can be fitted up in the general number of pits of this country. Alas, for the poor miners! many, I am afraid, will meet a premature death before this truly valuable invention can be made generally applicable to lessen the danger to which they are continually exposed from the breaking of ropes, chains, &c., while descending, or otherwise, the pits in which they have to labour, to procure that mineral so requisite to the healthy commercial prosperity of this country. Sir, being most anxious that as little delay as possible should take place in the execution of an order for such apparatus, and it being, no doubt, Mr. Fourdrinier's desire, as it is evidently his interest, to make all possible haste in the business, I endeavoured to ascertain by inquiry how long it was since the order had been given at Killing worth Colliery, and the answer was—"Just a fortnight since the cage was measured for the springs," as they are termed. Now, justly calculating that it would take the same time for all other applications, would it not be well for the Government to purchase such invention, and leave it open to all colliery proprietors to put up the same with as much dispatch as possible: it would save all the bargain-making, all the time spent in completing the arrangements with the patentee, and be the means of saving many valuable lives. Such a proposition is, I feel satisfied, but a part of the duty already undertaken by the Government under the "Mines' Inspection Bill," for this safety apparatus would be a permanent inspector, always at its post, constantly on duty, and performing the essentials of the office with more unerring certainty than the gentlemen who may be appointed to those offices. I trust the subject will be thought worthy of the attention of her Majesty's Government.—P. R.: *Oct.* 29.

PATENT LAW REFORM.

SIR,—It seems that we unfortunate inventors are at last likely to get our rights attended to, for agitation is rife in every quarter, Patent Law Reform Leagues and Associations being the order of the day. I think we must all be very ready to subscribe to the opinion, that the inventor is entitled to his property on quite as easy terms as the literary author; and why the inventor should not be styled an author I know not. But although I am by no means willing to give up one jot of my rights, I am not so blinded in advocating my own case, as not to acknowledge that, under the title of inventors, all sorts of pretentious plagiarists are continually seeking to engross the property of the public: witness the numerous cases where patents are taken out for inventions, either wholly devoid of novelty (and some devoid of utility), or else of so frivolous a character, as to be nothing but colourable invasions of the public property. Again, it may be stated, without much chance of error, that in the patent list the names of a great number of pirates are mixed up with those of real inventors.

Now, to come to the real object of my present communication, without further parley, allow me to remind the promoters of these leagues and associations, that although they have insisted upon the necessity of some things as regards patent reform which are most essential—for instance, the establishment of an index, or analytical list, of all patents granted, and also the simplification of the process of granting patents—yet they have hitherto left out one or two objects of high importance.

1. They appear to be content with reducing the cost of a patent to a payment of 5*l.* or 10*l.* per annum.

2. In requiring the simplification of the patent process, they have made no provision as to the allowance of opposition to the grant of a patent in certain cases.

3. They do not appear to have any distinct idea as to the plan by which patent property should be made more certain, by rendering the legal decisions more easy, expeditious, cheap, and decisive.

As regards the first of these defects, I know of many cases in which the payment of 5*l.* or 10*l.* would keep an inventor back nearly as much as the present price. The truth is, many inventors are so poor, that half-a-crown would not be too cheap for them. Now, the sequitur of this would be, therefore, let patents be granted for little or nothing. But stop; let us consider the effect on the inventor and the public. On the inventor very cheap patents would operate most prejudically: he would no sooner have secured his patent than a host of petty pirates would catch his great idea, and rush to the Patent-office, and patent some modification of it; and suppose he should be entitled to the protection of the law against this, what of that? As such parties might gain something by hampering a patentee in this way, they would lose nothing, or next to nothing, and it would be time enough for them to desist when the law should be enforced against them. As to the public, they would suffer somewhat from the multiplicity of frivolous patents, by finding every avenue of improvement stopped; and, perhaps, things might come to such a pass, that no manufacturer could alter a tool in his workshop without fear of infringing some patent. In patent reform, as in all other reforms, it will be found that the middle course is best.

Let the present enormous charges be removed; but let a sum be charged, just sufficient to check an inordinate growth of patents. Let proper provision be made for opposition before granting a patent, and, this being done, let the evidence which is to defeat a patent after it is granted be very strong and very direct. Moreover, let a proper tribunal be appointed to try patent causes.

The case of the very poor inventor must not, however, be lost sight of; for remember the true saying—*Necessitas est mater artium*, which might be paraphrased—"Poverty is the nurse of inventors." His case could not be better met than by a system of provisional registration or patent, which would protect him from any unfairness on the part of the capitalist, and enable him to take the opinion of the public as to his invention. There can be nothing more absurd than to suppose that a poor man can carry out an invention of any importance without a capitalist: to legislate under such an assumption would be folly. The inventor is not singular in being obliged to have resort to the capitalist; all enterprises af any moment are obliged to submit to the capitalist to some extent.

I see that opinions as to the mode of amending the Patent Laws are as thick as the scattered autumn leaves; in fact, "Chaos is come again." Now, really there seems little necessity for this, for the proposals already sanctioned by the Government and Legislature, with some additions, are, I think, quite sufficient, at all events, for a beginning; for the House of Lords has acknowledged the propriety of provisional registration, though the Committee of the Commons threw it out; and a Government Committee in January, 1849 (see *Mining Journal*), reported in favour of reducing the expense of a patent for the United Kingdom to 60*l.*—or, for England alone 30*l.*, Scotland 10*l.*, Ireland 10*l.*; also in favour of a much easier mode of passing the patent. Really, I think inventors cannot do better than keep the Government up to this. The appointment of a patent tribunal must not, however, be forgotten.—T. W.: *Fleet-street, Nov.* 1.

THE COPPER TRADE.

SIR,—Observing in the leading article of your valuable Journal of the 19th Oct. some remarks relative to copper smelting having been introduced into Australia and America, and that such introduction had been induced from the failure of certain smelting companies which had been formed in this country for the purpose of smelting for the mines, I think it right to inform you that one company—Low's Patent Copper Company—whose works are at Penclawdd, on the navigable river Burry, near Swansea, has been in active operation more than two years; and those mines that have entered into arrangements with it have found great advantage in so doing. This company is open to treat with copper mines, upon such terms as cannot fail to place them in a much better position than by selling, as at present, their ores at the public ticketings. Low's Company are enabled to enter into these advantageous arrangements with the mines, in consequence of the extreme simplicity and cheapness of their process, by which they are enabled to smelt copper upon terms that cannot be approached by those using the old process of smelting. T. R.

London, Oct. 30.

IMPROVEMENTS IN STEAM EXPANSION GEAR.

SIR,—Permit me to reply to Mr. Wills's remarks on Mr. Atherton's expansion gear, which appeared in your Journal of the 5th October. Mr. Wills, in submitting the plan which he conceives would, in one respect—viz., the reduction of the size of the steam passages—be an improvement on Mr. Atherton's arrangement, has very candidly acknowledged as follows:—"On the other hand, it has the disadvantage, which in a large engine would be very considerable, of requiring a slide of very large dimensions, which would greatly increase the friction, and the ports would possibly not work so steadily as Mr. Atherton's patented arrangement."

The point referred to by Mr. Wills has been duly attended to, and I have no doubt that Mr. Wills will, on full examination, be satisfied of the comparative inapplicability of his suggestion to the full opening of large ports, when the steam is required to be cut off at an early stage of the stroke.

As to the questioned validity of the patent, I am happy to observe that Mr. Wills's remarks on the point are equally candid, as he also makes the following acknowledgment:—"I believe that, mechanically, Mr. Atherton's plan is *superior* to the other combinations in use for effecting the same thing." This acknowledgment of *superiority* is all that could be desired. It combines the claim of originality and utility, which points being thus acknowledged, it appears to me that the validity of the patent can scarcely be assailed. But apart from the questions of patent law, let the readers of the *Mining Journal* examine the questions of practicability and utility, and they will find them to be fully answered. ALEXANDER GORDON.

Fludyer-street, Westminster, October 30.

ON SOME OF THE USES OF PYROGEN IN NATURE.—No. V.

BY JOHN JOSEPH LAKE.

There is something very unsatisfactory in the igneous theory of the origin of heat in the earth, and whilst there is another explanation of the phenomenon, there is no reason why we should fly to the hypothesis of internal fires. Experiment even is against it; for if the theory were correct, the heat of the interior strata would increase with an increasing ratio the lower we descend into the earth, on account of the absence of direct radiation. But the experiments of Mr. Fox, in some of the deepest mines of Devon and Cornwall, show the reverse of this to be the case—viz.: that for a given increase of temperature the increment of depth was greater. Taking as zero a temperature of 50° at 10 fms., he observed an increase of 10° at 50 ft. below this point; a further increase of 10°, at 72 ft. lower, and another increase of 10° at 114 ft. more of depth; and a second table exhibits similar increments of temperature at intervals of about 37, 78, and 126 fms. Thus, to obtain an increase of 10° in temperature, descents were required of 50, 72, and 114 ft., and 37, 78, and 126 fms., respectively. These different rates of increase in descent are not to be attributed to the escape of heat by the shafts, for this would be more uniform, and not be represented by feet of descent in one table, and by fathoms in another. These experiments are, therefore, opposed to the igneous theory; for if we were approaching an internal fire, or central source of heat, the increment of depth would be less for equal degrees of temperature. Mr. Fox's conclusions are, however, strictly in accordance with the hypothesis, that the heat of the earth is caused by the electric currents circulating in its substance. These currents descend but little depth into its crust, because it is the property of the particles of the electric fluid to repel and force each other from the interior of any body on which they are collected to the surface, on which account they are found only on the exterior of a metal conductor, or roll of wire-gauze. Through the operation of this law the earth is not saturated with the electric matter, as was formerly supposed, but the currents that are circulating about it move as near the surface as possible—as near, in fact, as the conducting power of the soil will admit of; for the matter of the earth offers considerable resistance to the passage of a current of pyrogen, the degree of which depends much upon the distance through which it has to pass, for it is found that the resistance is less for a greater distance than a short one. This is a very natural result, for the fluid has the opportunity of descending to a lower and moister stratum, and, therefore, a better conductor when it passes through a great distance. Were it not for the general state of dryness that prevails near the surface of our globe, the fluid would not descend below, owing to the repulsive force that drives it from the centre; but as it is its nature to follow the best conductor as far as possible, the one peculiarity modifies the other to a certain extent, and it moves by the moister strata beneath giving rise to that increase of temperature, which is supposed by many to be the result of an internal fire. The degree of heat is proportional to the quantity of pyrogen in motion, and the resistance offered to its progress, just as is the case when a piece of fine wire is placed in a galvanic circuit. Mr. Fox's experiments are in accordance with this theory, because the heat is generated laterally, and not vertically (as in the igneous theory), thus accounting better for the irregularity in the intervals of descent. Do they not also, when viewed with this hypothesis, point at the possibility of passing the maximum of heat when mining in some places?

The heat of the earth is not to be attributed altogether to the operation of pyrogen acting in this direct way; part of it, no doubt, arises through

the medium of chemical operations going on in the interior of the earth. Peltier's discovery, that a current of the fluid produces heat when travelling from antimony to bismuth, and cold when proceeding in the opposite direction, is not to be forgotten in the consideration of the subject; for bismuth and antimony are nearly the extremes in the electro-thermic series, and it is highly probable that the different strata may act in a similar manner to bismuth and antimony, and, by their electro-thermic conditions, or properties, raise the temperature of the earth higher than it would be through the mere circulation of the electric fluid without this peculiarity.—*Portsmouth, October 26.*

PROPOSED MINING EXCHANGE.

In pursuance of a circular addressed to the principal agents and parties interested in mining pursuits, a meeting was held at the George and Vulture Tavern, on Tuesday last, the object being the establishment of a Mining Exchange. The meeting was not, however, so fully attended as might have been expected, it appearing from a communication made thereat, that certain capitalists or adventurers in mines, and brokers, had partially formed such establishment, but whose arrangements had not been so perfectly carried out as to justify publicity being given on the occasion. A slight difference, for which we believe no grounds existed, would appear to have pervaded the meeting, the consequence of which was the withdrawal of certain parties, who, it appeared, had taken antecedent measures, and the remaining body expressing themselves in favour of an application to the Committee of the Stock Exchange. It remains, however, to be seen what will be the ultimate result, as there is little doubt but that active measures on the part of those immediately interested in mines would secure to them an independent market.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

BRIDESTOWE is a lime deposit, stained a little with greens; what they call native copper is coloured quartz. Nothing like a lode is to be seen. It will not make copper to any extent.

TREWALDER (St. Teath) will make nothing where the engine is; if any quantity of lead is found, it will be further north or south.

OLD TREBURGET and SOUTH TREBURGET are working on a new lode, but not likely to pay.

NORTH TREBURGET is coming out by a new company, who intend to search for the east part of Old Treburget lode, which was heaved by a caunter. A fair speculation, if three setts are combined.

WHEAL SARAH engine is again set to work. The levels in this mine are too confined to allow an opinion to be formed as to what she will make. They have not even pitted off the lode.

TREGEAR appears to be in mineral strata: lead and antimony are to be seen in many places, and said to be on different lodes, but it is worked in such a way, that no man can form an opinion. The sett, most certainly, should have a further trial.

TREGARDOCK is about to commence working, and is a fair speculation.

ROUGH TOR is improving, but the progress is spare, in consequence of the nature of the ground. I fear, if any little alteration takes place for the worse, she will be given up by the present party. The mine is certainly worthy of a further trial; and if now given up, the nature of her burrows will get her a fresh capital at some future day.

SHARP TOR has a very promising lode, but so large, that I am inclined to think she will not make copper shallow.

PHŒNIX is a pretty specimen of a mine at surface, but the present discovery of ore is short.

WHEAL LANGFORD will prove what her neighbours have before her. Good-luck now, I think.

CALSTOCK UNITED is a mine that, if worked with economy above the adit, with a fire stamp, will pay for a number of years.

HOLMBUSH is improving.

HEIGNSTON DOWN CONSOLS is also a very spare mine to work, and will tire the adventurers, if something is not discovered shortly. They are near a junction of two lodes, which may make ore, but not to a great extent.

DRAKE WALLS is much the same as she was 30 years since. She has always been losing money. The improvements in the machinery and dressing have kept her up. She is now better laid out than I have ever seen her. They raise a great deal of tin, but she will never prove a fortune to the shareholders

All the copper mines east are lost in the sands of Wheal Maria.

BRYN-ARIAN (Cardiganshire).—At the request of several of the shareholders, Capt. E. Francis inspected this mine on the 25th Oct., and reports that—"It is in an advanced state of development, several stopes making good profit, and improving as the work proceeds. I noticed three places in particular where a good quantity of ore was being raised. Pensarn lode, on which Hallet's shaft is in the course of being sunk, from all appearance, is likely to be highly productive. Pleased as I was with the underground operations, I was not the less so with the machinery on the surface—being of ample power, and well calculated for the various purposes of pumping, crushing, &c.—the whole reflecting much credit on the skill and efficient management of Capt. Trevethan. From the present state and future prospects of the mine, the adventurers may confidently look forward to the time (and that at no great distance) when they will receive adequate return of profits.

EAST TOLGUS sett lies north of the town of Redruth, and comprises a large piece of ground on the eastern side of a valley, on the western side of which are the mines of North Wheal Buller and South Tolgus, all the lodes of which mines pass through the entire length of East Tolgus. The works in progress for the trial of these are two adit levels, one of which, driving from old Tolgus Mine southward, will cross-cut the whole of the lodes in the western part of the sett. The other adit is also driving south, and will explore the eastern part of the ground. The western adit will probably cut the South Tolgus lodes in three or four months. The eastern adit is also approaching a point where some discoveries may be expected. The adventure is divided into 256 shares.

WHEAL MAY.—For some time past the committee of management have been engaged in carrying out the arrangements entered into at their last two-monthly meeting. The majority of persons who held original shares when the mine was divided into 5000 parts have already complied with the terms of resolutions which placed the adventure in a position strictly in accordance with the cost-book regulations, such shareholders having signed the cost-book, and paid the call of 5s. a share in the usual manner. Delay has necessarily taken place in proceeding with the works on the mine, but now that a sufficient number of adventurers have united in support of the undertaking, the committee have felt themselves justified in ordering a steam-engine of the best construction, of 14-horse power, to be erected and put to work within five weeks from the present time, by Messrs. Ash, Swift, and Co., of Thames-street, London, for the sum of 270*l*. The latest report from the mine states that in the deep adit the ground has now the most favourable indications of a near lode, and contains a great proportion of mundic. Now that an engine is actually ordered for the mine, shares are eagerly sought after at improved quotations, and a generally good opinion is entertained of the adventure. There seems to have been reasonable grounds for the delay which has been so often alluded to, and the committee were right in waiting until the adventure could be satisfactorily proceeded with.

WHEAL ANN (Phillack).—The engine went to work for the first time, on Saturday last. Its erection and construction were superintended by Mr. Sims, engineer: it is a 75-inch cylinder, and the powerful duty that it has been doing since has exceeded the most sanguine expectation.

ACCIDENTS.

Kilmarnock.—Henry Hamilton was so severely injured by an accident with a crane, by which he and some other workmen, at the Portland Iron Works, were lifting up some heavy metal pipes, that little hope is entertained of his recovery.

East Ardsley.—Thomas Robertshaw, a miner, was killed by a fall of coal in Messrs. Charlesworth's colliery.

Brazils.—At Passo Tempo Mine, in June last, while in the act of directing the men as to the future working of the mine, Mr. James Clark, formerly of St. Austell, aged 64, was killed by the falling of a quantity of stones, which crushed him in a dreadful manner. He was universally esteemed by all who knew him, both English and Portuguese.

Wednesbury—Another Death from Falling Down an Old Pit Shaft.—Margaret Trevor, a child four years of age, fell down an old pit shaft, belonging to Messrs. Lloyds, Foster, and Co., and was killed.

Sedgley.—An explosion occurred in Mr. James Bayley's colliery, at Willingsworth, by which five men and four boys were severely burned, two of the latter fatally, as it subsequently turned out. The deceased were Joseph Tranter and William Ward, both about 13 years of age, and who resided in this parish. Tranter's father was "doggy" of the pit, and having ascertained in the morning that sulphur existed in a particular part of the workings, he cautioned all the workmen regarding it. Young Tranter, however, forgot the caution, and took a lighted candle into the "back stall" in question.

Durham.—C. Atkinson was killed by the breaking of a chain at Pease's West Colliery.

Tipton.—Three Men Killed through the Carelessness of an Engineer.—A dreadful example of the too frequent reckless conduct of those in whose hands are placed the lives of their fellow-workmen, occurred at Mr. James Bagnall's Tividale Colliery. A skip, containing three men and two boys, was being drawn up the shaft, and the engineer was so impatient to leave his post for some purpose or other, that he caused the skip to ascend with great velocity, and it was drawn over the pulley. Two of the men fell down the pit, and the others were thrown out on the bank, and were very seriously injured. The engineer (William Hancox) ran away as soon as he saw the catastrophe which had occurred, and absconded from the neighbourhood. The names of those killed were Isaac Mills and J. Smith; and Joseph Rawley, one of the boys, has since died from the effects of injuries received.—*Birmingham Journal.*

Loughor—A fleeting Incident.—The son of David Parry, a workman in the Spitty Copper Works, having taken his father's dinner, was gathering coke from the tip near the works with some other children, when he complained of the smell arising from the sulphur, &c., burning below. He seemed affected by it, and lay down and slept, unnoticed by his companions, until the return of the workmen, who picked him up almost suffocated, and before the arrival of the surgeon life was extinct.—*Swansea Herald.*

Merthyr.—David Phillips was killed by a fall of clod at Abercanan.

Seaton Delaval Colliery.—W. Aisbelt was killed by a fall of stone.

London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their offices, No. 26, FLEET-STREET, where all communications are requested to be addressed. [November 2, 1850.